# CONFERENCE PROCEEDINGS

**MEDICON 2012**

**RETURN TO YOUR ROOTS**

**11 - 14 July, 2012**

## Fifth International Medical Students'Research Conference

of
**The Forum for Medical Students' Research (India),
INFORMER**

**Informer**

Observation beyond vision

**Hosts**

**Mahatma Gandhi Institute of Medical Sciences,
Sewagram**

## Editorial

Medicon, is an annual undergraduate Medical students research conference, which provides a platform for novice medical researchers to present their work and learn from their peers. It is the flagship event of The Forum for Medical Students' Research, India (INFORMER). It is completely organized by undergraduate medical students, themselves and each year a different team in a different medical college, in a different part of the country takes up the challenge. With Medicon 2012, the conference has completed five years of its journey providing platform to more than 2000 medical students to present their scientific paper and share their research ideas with the peers.

With the aim to bridge the gap between urban and the rural, in order to break the myth that research is confined to medical colleges located in big cities, the conference this year was hosted by Mahatma Gandhi Institute of Medical Sciences, Sewagram, a medical college and hospital, in a rural setting, located in the central part of India. The following is a short report of the conference and scientific proceedings of the conference.

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Dr. Amrita Kalantri,

Dr. Goral Gondnale,

Dr. Abhimanyu Singh

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Medicon 2012, the Fifth International Medical Student's Research Conference, of the Forum for Medical Student's Research (INFORMER) was hosted by the Mahatma Gandhi Institute of Medical Sciences (MGIMS) from July 11 to 14, 2012, in Sevagram.

The conference was conceived, planned, and organized by a group of interns and medical students from MGIMS. The theme of the conference was 'Return to Your Roots'- sensitizing young students to the real health problems people face and how health professionals address them in resource limited settings. Over the four days of the meet there were debates, discussions and deliberations on various aspects of this subject.

Close to 375 medical students, from all over India attended the conference. We also received international participation from Indonesia, West Indies and Oman. The medical students who had just started learning medical research were addressed by researchers, public health activists, social scientists, and medical teachers. It served as a platform for medical students to share their first research projects with their peers and the wider research community. It was a very good opportunity for them to network and connect with other likeminded students and eminent researchers.

The faculty included Dr. Arjun Rajugopalan, Dr. Binayak Sen, Dr. Abhay Bang, Dr. Manu E Mathew, Dr. Sudhir Bhave, Dr.

Sanjay Nagral, Dr. Rakesh Biswas, Dr Shivika Chandra,Dr. Vinay Kumar, Dr. Trish Groves, Dr. Lalit Dandona, Dr. MG Deo, Dr. SP Kalantri and Mrs. Vasumathi Sriganesh.

**Pre-Conference Workshops:**
The four-day long meet began on 11th July with preconference workshops on How to write a paper, Basic life support skills, Laboratory Medicine, and Evidence Based Medicine. Each workshop was attended by 25 participants. The workshop on How to write a paper, focused on the elements a medical paper is composed of- introduction, methods, results and discussion. The experts provided enough tips and tricks that can convert an unpolished manuscript into a publishable paper. In the Basic life support skills workshop the participants learnt how to intubate a patient, use a defibrillator and perform cardiac massage and use inotropes. The workshop on Laboratory medicine focused on simple laboratory techniques used in research. TheEvidence based medicine workshop provided the students with an introduction to the concept. The students leant the basic skills of formulating the right question, searching and appraising research evidence, while making health care decisions.

**Invited Speakers and Keynote Presentations**
Dr. Vinay Kumar, Abhay Bang, Lalit Dandona, BinayakSen, Roli Mathur, MG

Deo, Rakesh Biswas, Sanjay Nagral, and Sudhir Bhave spoke in these sessions. The sessions focussed on the relevance of the conference, the rationale for its existence, and the relevance of the theme, as health professionals are not asking appropriate questions for problems that are begging urgent answers. Well-known public activist, Dr.Binayak Sen spoke about grave social issues like hunger, equity and justice, which mar the health care system in the country. Dr. Abhay Bang, researcher and public health activist, who introduced students to his concept of research with people, told them about the importance of people's involvement in the work they do. Dr. Lalit Dandona from Public Health Foundation of India, also a distinguished researcher himself said, "Students need to understand that factors like disease distribution and disease burden help mark out the priorities of the health care system. Applied research, which has a direct impact on people, is more important than lab research. Dr. Sanjay Nagral gave examples of increasingly commercial and corporatized nature of healthcare, and said that medical schools and organizations like the IMA should provide leadership and a sense of direction to the individual medical professional overwhelmed by change. Dr. Roli Mathur gave glimpses of short term studentships offered by Indian Council of Medical Research.

## Panel discussion

On 12 July 2013, a panel of six experts and three medical students discussed if forcing fresh medical graduates into rural service will solve the problem of delivering healthcare to the rural healthcare seekers. The medical students argued that forcing medical graduates into rural services is no solution for the lack of good health care in the villages across the country. The panel that held a discussion on the topic concluded that the solutions would be to ensure better civic amenities in the rural areas, nurturing a sense of service to the society among students, a provision of incentives for rural postings and rescheduling the post graduate entrance examinations. Medical activist Dr. Abhay Bang agreed that social determinants like poverty, hunger and hygiene were big issues in rural India. However, he also pointed out to the youngsters that 79% of doctors in villages are quacks, which is a matter of shame for anybody in the health sector. "The students have wrong role models to follow with money-worship being the trend. Even in the US, every citizen has a compulsory two-year military service. It is all about giving back to the society," he told the students. Physician and human rights activist Dr. Binayak Sen pointed out that a fresh graduate is not equipped to treat people the way an experienced doctor is. "It is wrong to assume that diseases of simple people can be treated by simple doctors," he said. "Such disparities exist even in the developed world. In US, for example, the factor of disparity may be one's income. Yet there is a parallel system of osteopaths who serve the population that may otherwise not be able to go to a doctor," said Dr. Vinay Kumar, professor of pathology at University

of Chicago. Research professor from Public Health Foundation of India Dr. Lalit Dandona told the students that they could not detach themselves from it. He said, "It is sad that the system has failed to make youngsters think on these lines. The students themselves do not realize how this exposure can help them." Professor of People's College of Medical Sciences Dr. Rakesh Biswas told the students that pathos was more important than pathology. Medical scientist Dr. MG Deo thought the lack of 'good' doctors was an even bigger problem. "It is sad that the active academic life of young doctors is being sacrificed due to the government's fault," he said.

**Paper Presentations**

Over a three day period, the campus was abuzz with 125 oral and 180 poster presentations by the student delegates. Although the students were neophytes in medical research and clearly lacked skills, experience and expertise to do research, they had worked hard to get their presentations right- efforts that did not escape the discerning eyes of experienced judges. The judges not only critically appraised the presentations but also provided insightful suggestions for future improvement.

Medicon 2012 continued the fine Medicon tradition - "group presentations" that provided an opportunity to a group of students involved in a group research project to present their research. Paper presentations and plenary sessions apart, the conference

also provided a platform to the medical students to discuss and debate a clinico-pathological case and contextualized evidence. The discussion was organized around a competition format where, the delegates and faculty enthusiastically discussed different points of view.

Way before the conference began, the organizers had asked students to compete in an online picture and essay competition on the theme of the conference. They showcased their photographs on a wall- aptly called The Medicon Wall which was autographed by all the guests.

The conference provided an opportunity for participants to learn how to read, write, use power point, create posters and share ideas. Students made new friends. Everyone learned something. Researchers, public activists and teachers from all walks of life were able to bring their rich knowledge and experience to the conference halls- a fact appreciated by all participants.

# *Abstracts*

## Studying Behavioral Problems In Children With Dyslexia And Without Dyslexia
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## Introduction

Dyslexia is the most common learning disability in children and persists throughout life. The prevalence of dyslexia ranges from 3 to 17 percent of the school age all over the world including India A dyslexic may react differently to social situations causing embarrassment to others. Literature review revealed no study on behavioral problems in dyslexics in India. This study aimed at finding impact of dyslexia on behavior of children.

## Materials and Methods

A case control study along with qualitative research was carried out to study the relationship between dyslexia and child behavior among 3 to 7 years children. Child behavior scale was used to study the behavior as rated by mothers as primary caregivers, fathers as secondary caregivers and teachers, whereas qualitative research was carried out with in-depth interview and focus group discussion. Statistical analysis was done with parametric tests e.g. 't' and ANOVA and agreement between primary and secondary caregivers was tested with Kappa.

## Results

50 cases and 70 controls participated in study. The results showed statistically significant difference between the cases and controls in their behaviors as the behaviors were not well developed in cases. When behaviors were rated by different observers there was statistically significant difference in their ratings in cases. When agreement was tested with Kappa Coefficient there was poor to fair agreement in cases and fair to good agreement in controls. This might be because there was no stability of behaviors in cases. Statistically significant difference was seen in negative affect (p=0.001) and effortful control (p=<0.01) Kappa coefficient in cases was between 0.08-0.27 and 0.08-0.69 in controls for various behaviors.

## Conclusions

Children with dyslexia encounter many difficulties in their journeys, and must be encouraged not to give up. Parents and teachers can play a big part in helping their child to find alternative routes and methods to reach his/her goals.

## Key Words

Behaviour problems,dyslexia,multmethod approach

## The Pattern and Determinants of Cerebrovascular Accidents
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## Introduction

Cerebrovascular Accidents (CVA) cause 7% of deaths worldwide. 15 million strokes occur yearly. Two thirds of stroke victims live in low income countries like India where prevalence of stroke is 203 per 100,000. There are few studies on risk factors for stroke in India. This study was undertaken to assess the pattern and risk factors of CVA among a rural population in Thrissur, Kerala.

## Materials and Methods

Case control study conducted in Thrissur between July and September 2009, covering 52 CVA patients and 88 matched patients as controls. Subjects interviewed using structured questionnaire, assessing details of CVA, family history, past history, history of hypertension, diabetes, dyslipidemia, personal history, treatment history and test results. We compared the risk factors in cases with those in controls.

## Results

All patients presented with hemiplegic CVA. 50% had left sided CVA. In 75%, attack occurred in sleep. 16 patients had sensory symptoms, 34 had speech difficulties, 30 had symptoms suggesting cortical involvement and 24 had symptoms of autonomic disturbances. 23 patients gave past history of CVA. 46 patients had ischemic CVA, the rest had hemorrhagic CVA. Most common site of lesion was internal capsule. 12 patients presented with multiple infarcts. Statistically significant risk factors included hypertension, diabetes, dyslipidemia, past attack of MI, history of migraine, tobacco chewing.

## Conclusions

Screening and control of modifiable risk factors like hypertension, diabetes, dyslipidemia, and tobacco chewing can help in early detection of high risk cases and reducing the incidence of CVA.

## Key Words

CVA, Hypertension, Diabetes, Migraine, MI, Tobacco chewing

## Trigger factors of migraine headache in 50 Vishakhapatnam patients
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## Introduction

Migraine is a recurrent primary headache disorder characterized by different clinical presentations. The identification of triggers throws a new light into the pathogenesis of migraine. We conducted this study to analyse the incidence of already found precipitating factors in a group of Vishakhapatnam patients and to find out new trigger factors.

## Materials and Methods

A total of 50 migraine patients attending Neurology Out Patient Department of King George Hospital in Vishakhapatnam who were diagnosed as having migraine based on the criteria given by the International Headache Society(IHS) were interviewed about the trigger factors and the incidence of each trigger factor was identified.

## Results

The patients (36 women and 14 men) were aged between 13 and 60 years. Stress (42 subjects) and lack of sleep (37 subjects) were the major triggers. Environmental factors like sunlight, loud noises and dehydration, crying, frequent headbaths, and exposure to visual display units were also triggers. A fifth of women had migraines provoked by menstruation.

## Conclusions

Patients with migraine can expect to have fewer headaches if they are made aware of the triggers.

## Key Words

migraine,triggers,stress,IHS,KGH

## Diagnostic Performance of the Palmar Pallor – INMCI Tool in Identifying Anemia among Under Five's in Visakhapatnam
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## Introduction

There is a high burden of anemia in India which leads to intellectual property loss as well as reduction of work output. Iron deficiency anemia is still a major nutritional problem in India among under five children. Govt. of India has launched IMNCI program where treatment of anemia is one of the component. IMNCI advocated identification of anemia by observing palmar pallor. Sahli's method of hemoglobin estimation has been used since long and is the most widely used test. This study was done to compare IMNCI tool- palmar pallor and Sahli's method in detecting anemia among children aged less than 5 years.

## Materials and Methods

We conducted this hospital based diagnostic accuracy study at King George Hospital, Visakhapatnam. We recruited 150 Paediatric outpatients and inpatients, aged 5 years and less and assessed anaemia by examining the palms. We also measured their haemoglobin by Sahli's haemoglobinometer.

## Results

Out of 150 children, 59% were boys. The mean age of the boys and girls was 28 months and 26 months respectively. In our study 21% of the mothers were illiterate, 37% had primary education, 29% had secondary education, 11 % were graduate, and 2% were post graduate. 18% children were judged to be anaemic by their palmer examination. 90% of the positive cases had their weights and heights lees than the normal standard values by more than 2 standard deviations. The hemoglobin levels show that 21% of the study population had anemia. the mean hemoglobin levels among boys and girls was 12.6 gram% and 11.2 gram% respectively. Among the positives for palmar pallor the mean levels are 9.8 gram% and 8.9 gram% among boys and girls respectively. The overall accuracy of palmar pallor-IMNCI TOOL was 86%

## Conclusions

Diagnosis of anemia is possible by palmar pallor (color scale). Mothers can be educated regarding the identification of anemia based on palmar pallor.

## Key Words

PALMAR PALLOR , UNDER FIVE CHILDREN , TEACHING HOSPITAL, ANEMIA.

## Assessment of Risk Factors for Non Communicable Diseases Using WHO Step up Approach in Visakhapatnam City

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### Introduction

Non communicable diseases such as hypertension, diabetes and coronary artery disease are common in urban and rural India. We did this study to assess risk factors for NCDs in our setting.

### Materials and Methods

Study Setting: urban residential colony in Visakhapatnam city. Study Population: individuals between ages 18-65. Sample Size: 300. Study Tools: W.H.O step up approach questionnaire (step 1, step 2) Study Variables: age, alcohol consumption, BMI, blood pressure, diet, gender, physical activity, and smoking.

### Results

In our study 62% were males and 38% were females (age range-18 to 65 years). 61% were married; 69% were Hindus; 25%, Christians, and 6%, Muslims. 37% belonged to the upper income group, 54% to the middle income group and 9% to the lower income group. A third of the study population smoked and the mean age they started smoking was 21 years.30% were alcoholics and the mean age they started drinking was 22 years. 62% of population was sedentary. 6% took extra salt in their food.13% ate red meat regularly.43% consumed fruits only once a month..27% were diabetics, 24% hypertensive, 7% had coronary artery disease; 29% were pre-obese and 28 % were obese.

### Conclusions

The prevalence of risk factors was high .The higher and middle income groups were equally affected by them. We need to target younger individuals to ensure that they do not drink alcohol, do not smoke, walk regularly, stay thin and eat plenty of fruits and vegetables.

### Key Words

non communicable diseases,risk factors,WHO step up approach,alcohol,smoking,diet

## Treatment Seeking Behavior of Leprosy Patients Attending Out-Patient, Department of Dermatology, K.G.H

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### Introduction

Leprosy is a disease, which still strikes fear in the societies as a mutilating, disfiguring, contagious and incurable disease. It is estimated that between 11 and 12 million people living in the world today have suffered from leprosy. It is simply not enough for the medical profession and society to treat the disease and ignore the patient as a whole person. Many, despite their leprosy being dealt with, are still living a sub existence, mere shadows of their former selves and their true potentials. Humiliation and fear can prevent diagnosis and treatment, leading to more severe manifestations of the disease and causing deformities.

### Materials and Methods

We aimed to assess the socio-demographic factors and treatment seeking behaviour of leprosy patients attending out-patient, Department of Dermatology, K.G.H.Study site is out-patient, Department of Dermatology, K.G.H, Period is 01-05-2011 to 31-05-2011, Tools were Pre-tested questionnaire, Variables are Diagnosis of Leprosy, treatment seeking behavior, follow up and Analysis will be done using percentages.

### Results

Male: female ratio was 50:15, different occupations were agricultural and related 10, Day labourers 26, basket weaving 4, clothes weavers 2; dhobi 10, drivers 5, flower /vegetable sellers 5, carpenters 3. Rural and urban ratio 50: 15. Source of treatment: Private: government is 20: 45.Paucibacillary: multibacillary 30:35, regular treatment 62, Irregular in taking treatment are 3, Time lag between diagnosis and treatment Zero in 5, </ = 2 months in 20, 2 months to 2 years in 40 patients

### Conclusions

About 50 patients were from a rural back ground whereas 15 were from urban areas. About 62 patients took regular treatment whereas three patients were irregular in taking treatment

### Key Words

treatment seeking behaviour,leprosy

## Role of Immunophenotyping in the Diagnosis of Acute Leukemias of Ambiguous Lineage
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## Introduction

Biphenotypic ambiguous leukemia represents < 5% cases of acute leukemia. Knowledge about BAL is limited in terms of clinical and biological presentation and with regard to outcome. More importantly, prognosis is poor compared with de novo AL. This study aims to analyze immunophenotypic profile of Acute Leukemias of ambiguous lineage and to study the prevalence in Indian scenario.

## Materials and Methods

Flow cytometric immunophenotyping (FCI) was performed on fresh bone marrow or blood specimens. Single-cell suspensions were incubated with combinations of monoclonal antibodies in four-color immunofluorescence. The antibodies were conjugated to fluorescein isothiocynate (FITC), phycoerythrin (PE), peridinin chlorophyll protein complex (PerCP) and allophycocyanin (APC). Antibodies used in the analysis recognized stem cell and panleukocyte antigens including CD45. Samples were analyzed using 4 color flow cytometry and the blast cell populations were identified by CD45 versus side scatter properties using standard staining and analytical methods.

## Results

4 of 24 cases of acute leukemia were diagnosed as AML or ALL based on FAB (16%). However, on FCI these were diagnosed as BAL, Bilineage AL and ALL with aberrant myeloid expression

## Conclusions

Unlike commonly seen acute leukemia classified as B or T lymphoid or myeloid lineage, BAL is a type of acute leukemia with uncommon biological and clinical features. Limited studies are available for Indian population in this regard and hence at least, patients who are not responding well should be screened for ambiguous lineage using comprehensive FCI and molecular studies.

## Key Words

leukemia,BAL,flowcytometry,immunophenotyping

## Comparison of Didactic Lecture versus Student Led Seminar as a Tool for Teaching- Learning Activity in an Undergraduate Medical College in India.
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## Introduction

Medical education evokes intense discussions and debates in India for several reasons. Many of these reasons have nothing to do with the quality of graduates produced. It is directly linked to quality of life of citizens, improvement in maternal and child health, productivity and sustainable development. Apart from building new medical schools, developing better infrastructure, well-equipped teaching hospitals, qualified and experienced teachers in adequate numbers and modern teaching- aids, innovations in teaching- learning techniques are also required. Although traditional didactic classroom lecture-based teaching remains a core component of undergraduate medical education, participatory/ interactive teaching methods are claimed to improve educational quality considerably. We did this study to compare the effectiveness of a "student-led seminar" with a "traditional didactic lecture" in the teaching-learning process.

## Materials and Methods

A prospective study was conducted on two non-randomized groups of medical students belonging to 3rd and 4th year of a graduate medical college, with similar background subject knowledge. Both groups had a teaching-learning experience on the same subject i.e. Iron Deficiency Anemia. One group attended a didactic lecture while the other attended a student-led seminar. A pre-validated, self-developed questionnaire (10 questions based on the subject knowledge expected of a medical graduate) was administered to both groups before and after the separate teaching- learning activities. Two Additional questions on self-assessed level of subject knowledge and preference of teaching -learning method were also included. Pre and post teaching- learning activity responses were analyzed for "gain index" of both groups.

## Results

A total of 81 students participated. Of these, Group A (41 students) attended a student- led seminar and Group B ( 40 students) attended a didactic lecture. Baseline knowledge of the two groups before their respective teaching sessions were similar with Group A having 45.88% and Group B having 42.1% correct responses. In the post-teaching evaluation, Group B had 88.2% correct, while Group A had only 53.7% correct responses

(P<0.05).The self-assessed knowledge score of Group B also increased significantly from 2.8 to 4.0, post-activity. The proportion of students rating their knowledge as excellent was also more in Group B.

## Conclusions

The study shows that both-objective performance and subjective satisfaction of students (self-assessed knowledge gain) improved much more after traditional didactic lecture than student-led seminar on a common topic. Unsupervised student-led seminars cannot be used as the primary teaching-learning method at undergraduate level in India, where mainstream school education is pedagogy-based and does not prepare students for androgogy or self- directed adult learning process.

## Key Words

didactic,teaching,learning,active

## Evaluation of Incidence and Risk Factors for Polycystic Ovarian Syndrome (PCOS) among Adolescent School Girls

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## Introduction

The diagnosis of PCOS in adolescent girls is difficult, mainly due to similarities in the irregular bleeding patterns among adolescent girls with PCOS and normal post-menarche girls. But an early detection and lifestyle modifications (diet, exercise and stress management) can help in preventing long term complications. With the early onset of menarche and increasing incidences of PCOS among urban adolescent girls, the need to imply methods of prevention and awareness at school level arises. This research addresses the issue and brings forward the need to adopt means of early, better and efficient management of PCOS..

## Materials and Methods

An overview about PCOS and its clinical relevance was explained to the school girls by using a PowerPoint presentation. A pretested questionnaire (16 questions) was administered to the girls. Based on the responses, symptomatic girls underwent ultrasound, after informed consent, for confirmation. Chi-square test was used to test association between irregular menstrual cycle and various risk factors for PCOS.

## Results

The incidence of PCOS in the given study group was found to be 17.5%. In the study group, correlation between obesity and clinical symptoms of PCOS was established. Association between family history of diabetes and hypertension with clinical symptoms of PCOS was not established.

## Conclusions

PCOS is on the rise among adolescent girls. With the changing lifestyle and increased stress among young students, there are higher chances of acquiring PCOS at this age group. It is important to educate and aware girls about their reproductive health and rule out any cause which might lead to infertility or sub-fertility at a later stage.

## Key Words

Early diagnosis, obesity, life style modifications, diet, exercise

## Awareness on Nanomedicine, Nanotoxicology and Nanomaterial Waste Disposal System among Medical Residents and Nanoscience Students/ Research Scholars

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## Introduction

Nanomedicine is likely to provide more accurate, reliable and cost effective health care and improve the quality of human life. India has contributed to nanoscience to some extent for nearly three decades. The objective of the study was to find out the awareness on nanomedicine (NM), nanotoxicology (NT) and nanomaterial waste (NMW) disposal among medical residents and nanoscience students/ research scholars..

## Materials and Methods

Subjects of the study were medical residents (n=500) of five medical colleges and nanoscience students / research scholars (n=90) of different institutions of Tamilnadu. They were given a self- explanatory questionnaire/ statements with a brief introduction and asked to hand over it at the end of 10 minutes with their response. Participants were

explained about the nature of study and asked to tick the things known to them under "yes, no and uncertain". The anonymous questionnaire/ statements consisted of nine closed ended items, five related to NM, two on NMW disposals and two on NT. The last one was an open ended question to elicit the interest of the participants on NM, NT and NMW disposal system. The data were analyzed statistically. P value less than 0.05 was considered significant.

## Results

The questionnaire was returned from 488 of the former and 76 of the latter and the response rate was 97.6 and 84.4% respectively. Among the medical residents, 71 [14.5%] studied about NM and none were taught on disposal of NMW. Unawareness and uncertainty of NMW disposal, environmental toxicity, nanotoxicology and health hazards of nanoparticles were more among medical than nanoscience students / scholars, and the difference was significant statistically. Interestingly, 73.9% of former and 96% of the latter liked to learn more about NM, NT and NMW disposal.

## Conclusions

Awareness of NM, NT and NMW disposal among medical residents and nanoscience students/scholars were far from satisfactory. NMW disposal, effect of NMW on environment and nanotoxicology were not highlighted during medical education. Both the group liked to learn/ know more on these areas. Statutory bodies and universities should introduce relevant aspects of nanoscience in curricula.

## Key Words

Nano science, Unawareness,Medical education,Training

## Preanalytical Errors in Clinical Biochemistry Laboratory
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## Introduction

An effective clinical practice requires proper diagnosis. In recent times the advent of scientific advancement and its applications have changed the diagnostic sector. Laboratory service has become the cornerstone of modern health care systems. This study was undertaken to find out the prevalence of errors occurring in our clinical chemistry laboratory in the preanalytical phase..

## Materials and Methods

This prospective study was carried out at the Clinical Biochemistry Laboratory of a Medical College Hospital over June and July 2011. A total of 4602 samples were received from inpatients and outpatients with the accompanying request forms. The requisition forms were screened for the presence of the information such as patient's name, age, sex, the hospital identity no., location, and clinical diagnosis. After centrifugation, the blood specimens were inspected for the presence of hemolysis, lipemia, and adequacy.

## Results

A total of 4602 request forms and samples were scrutinized. The errors were: one (0.02%) request form didn't have the patient's name; 33 (0.17%) forms didn't mention patient's age; gender of the patient was not specified in 81(1.76%) and location in 238(5.17%) forms; the hospital identity no. was not to be found in 120(2.60%); clinical diagnosis was found missing in 2508(54.49%) forms. Out of the total 4602 samples hemolysis was observed in 38 (0.83%) and lipemia in 8 (0.17%) specimens. The volume of seven specimens (0.152%) was found to be inadequate for analysis; two (0.04) specimens were found to be diluted with the intravenous fluids. All specimens had been collected in appropriate containers.

## Conclusions

The overall prevalence of preanalytical error was found to be 55.7%. Most of the errors were minor- clinicians and nurses had missed on some variables when the forms were being filled. In-service and pre-service error reduction programmes for health professionals can reduce the frequency of such errors.

## Key Words

preanalytical errors, clinical chemistry laboratory, health hazards

## Comparative study of reaction times in type 2 diabetics and non-diabetes
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## Introduction

Reaction Time is a reliable indicator of processing of sensory stimulus by central nervous system and its execution in the form of motor response. Our study aimed to evaluate the effect of hyperglycemia and other

complications of Diabetes Mellitus on the central processing of signals and on peripheral nerves..

## Materials and Methods
The study was conducted on 50 subjects (25 controls and 25 patients) between 30 to 50 years of age. Auditory Reaction Time and Visual Reaction Time were recorded using Digital Display Response Time Apparatus and three auditory stimuli (low, medium and high pitched sounds).

## Results
The study explored the consequences of Type 2 Diabetes Mellitus on the reaction time. Auditory and Visual Reaction time was found to be markedly increased in diabetic patients.

## Conclusions
Patients with long standing Type 2 Diabetes Mellitus suffer from many complications. Diabetes affects peripheral nerves in the somatosensory and auditory system, slows psychomotor responses and has cognitive effects on those individuals without proper metabolic control, all of which may affect reaction times. The cognitive domains that were most adversely affected by hyperglycemia in people with Type 2 Diabetes were information processing speed and working memory. Delayed reaction time in diabetics without clinical neuropathy can be taken as a noninvasive, low cost, sensitive indicator of early nerve damage without clinical signs or symptoms.

## Key Words
Diabetes, reaction time, cognition, hyperglycemia

### Comparison of prevalence of overweight and obesity in children from two schools and its correlation with physical fitness and socio-economic status

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## Introduction
Childhood obesity is a serious public health challenge, for which there is limited representative data. Effective prevention of adult obesity requires prevention and management of childhood obesity. This study aimed at comparing the prevalence of overweight and obesity in school children from low and upper socioeconomic status and analyzing the relation between obesity and various parameters of health-related physical fitness..

## Materials and Methods
This is a cross-sectional, randomized, epidemiological study conducted on two groups of school children (n=100 in each group), 7-10 years old from two different schools- a Government (Group 1) and a Private school (Group 2) from a North-Indian city (Ludhiana). Socio-economic status (SES) was assessed using the Modified Udai Pareek Scale for urban areas. Body weight, height, waist, hip and mid-arm circumference was measured and Body Mass Index (BMI) and Waist–Hip Ratio (WHR) were calculated. Children were classified as normal, underweight, overweight and obese. All participants were also interviewed on their usual physical activity and eating habits. The physical fitness components assessed included: Flexibility (Back-saver sit and reach test) and Trunk extensor strength and flexibility (Trunk lift test) adapted from the Fitness Gram test developed by The Cooper Institute, USA.

## Results
All students in Group 2 belonged to high SES while in Group 1, 74% students belonged to middle and 26% to low SES. The prevalence of overweight and obesity was found to be 22% and 21% respectively in Group 2 as compared to Group 1 where only 5% children were overweight and none was obese. 28% children were found to be underweight in Group 1 as compared to Group 2 (1%). The children in Group 2 had higher mean values for waist, hip and mid-arm circumference as compared to Group 1. The students of Group 1 had significantly better results ($p<0.01$; z-test) in both the Physical fitness tests and spent more time in vigorous physical activities daily as compared to Group 2.

## Conclusions
The problem of overweight and obesity is mainly associated with high socio-economic status, lower physical activity and regular consumption of high fat and high energy diet, thus leading to lower levels of health-related physical fitness.

## Key Words
Children, Obesity, Overweight, Socio-economic status (SES), Physical fitness

## Refractory errors and color blindness among truck drivers – A pilot study
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## Introduction

There are about 5 million truck drivers in India. As the vision sense plays a prominent role in their day to day activities which has a key role in safe driving on Indian roads, their visual tasks/vision sense needs to be checked periodically. The quality of vision depends upon three factors: 1. A reasonably good visual acuity, 2: Absence of colour vision deficiency, 3: Absence of night blindness. Hence, I have chosen to screen truck drivers to detect visual abnormalities that hamper their driving abilities..

## Materials and Methods

We carried out an interventional prospective study on truck drivers. Truck drivers are screened at their resting places after obtaining their prior consent to detect the basic visual disabilities that interfere with their profession, viz refractive errors, colour vision deficiency and night blindness. Their visual acuity was checked by using standard Snellen's test type charts as used by a qualified eye specialist, colour blindness using standard Ishiharas colour vision plates and are asked for the presence of night blindness. The results were properly tabulated. The study was done in 2 months period and 140 truck drivers have been screened.

## Results

Out of 140 truck drivers screened under this study, the no of truck drivers with visual acuity 6/6 (normal vision) is 87(62.14%).The no of truck drivers with refractive errors is 40(28.57%). Of the 40 truck drivers with refractive errors 11 are having myopia, 20 are having hypermetropia and 9 are found to have astigmatism. Irrespective of refractive errors 44 truck drivers are having presbyopia (inability to see near objects).The no of truck drivers with colour blindness is 0 and those with night blindness is also 0.

## Conclusions

Out of 140 truck drivers screened under this study 40(28.57%) are found to have defective vision (refractive errors) and most of the truck drivers having defective vision are identified within the age of 41 to 60 and above 60 years (25). This indicates that the above age group drivers should be screened frequently to detect visual defects and they are also encouraged to wear corrective glasses (spectacles) to have the optimum visual abilities. None of the drivers have colour blindness and night blindness

## Key Words

truck drivers, visual acuity, colour vision, night blindness

## E-Health – An Approach to Remote Healthcare Solution
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## Introduction

India's 22,669 rural health centers are disappointingly short of skilled medical personnel and their poor state only increases people's suffering. According to NRHM report ~8% PHC's do not have a doctor, ~39% a lab technician and ~17.7% a pharmacist. Delivering health care to such a huge populace therefore presents enormous challenges. We did this study to examine the state of rural healthcare in Markal, Alandi and to devise an improvement plan for use of e-health system..

## Materials and Methods

The data collected from our survey of Health Camp in village Markal (population 6000), Maharashtra forms the basis of our study. A team of 10 doctors examined 500 people of all age groups and both sexes for communicable and non-communicable diseases prevalent here. Of these, a case study of 50 random people was drawn up by analyzing their signs and symptoms, general, and systemic clinical examination, including height, weight, blood pressure etc.

## Results

The numbers flashed Cataract (based on lens opacity, dimness of vision and over-sensitivity to light), Hypertension (based on raised BP) and Cardiovascular Diseases (confirmed through past history and clinical examination) alerts for those aged 50+. There were no public/private hospital facilities, Pharmacy, pathology labs, emergency medical services. There was only one public and two private health centers with two registered medical practitioners. There was lack of awareness of common diseases, nutritional requirements, pregnancy and child care.

## Conclusions

"E- Health" is suggested as a possible solution to provide quality health care services where distance is a major factor. Specialists can advise, consult and treat patients using advanced telecommunication technology.

## Key Words

Heath-care delivery,E-health, Remote consultation,telemedicine

## Behavioral Changes in Cancer Patients Undergoing Chemotherapy
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## Introduction

Most Oncologists give more importance to aggressive treatment of cancer with curative intent whenever possible. However, in this pursuit the side effects of chemotherapy leading to behavioral abnormality are given less importance. In this study we assessed the behavioral effects and analyzed if physical symptoms or a specific type of treatment had any impact using the Distress Inventory for Cancer (DIC) and the Hospital Anxiety and Depression Scale (HADS)..

## Materials and Methods

The study included 100 cancer patients undergoing chemotherapy in the wards, outpatient department and the day care center of Father Muller Medical College Hospital. Data was collected by using the Distress Inventory for Cancer (DIC) and the Hospital Anxiety and Depression Scale (HADS). Statistical analysis was carried out using Anova and Pearson Chi square test.

## Results

Of the 100 patients who participated in the study 45 were men and 55 women. 65% patients were aged more than 47 years; 94% were married. A third of patients had only primary education; two-thirds of the patients were below poverty line. Nearly half the patients (48%) were not employed which included women at home. With regard to staging of the disease, 12% were stage I, 18% stage II and 28% and 42% stage III and IV respectively. Ninety five patients had solid tumors. 44 patients were on adjuvant chemotherapy while 21 were receiving neoadjuvant therapy and 35 were on palliative chemotherapy. Among the patients who received chemotherapy 27% perceived pain and 30% had nausea and vomiting .A quarter of patients experienced depression and anxiety.

## Conclusions

The current study highlights significant number of patients receiving chemotherapy experience psychological morbidity indicating that psychological interventions such as counseling and optimum pain management should be considered in the holistic management of cancer patients.

## Key Words

chemotherapy, depression, distress, psychological morbidity, behavioural change

## Antioxidant Status in Patients with Malaria
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## Introduction

Malaria is one of the major health problems all over the world affecting 40% of the population. Oxidative stress plays an important role in the development of malaria, as malarial infection has shown to generate abnormally large quantities of ROS as well as changes in the antioxidant defense system. To counteract them different antioxidants protect body against free radical and prevents oxidative stress. Uric acid, end product of purine catabolism is considered to be the most abundant aqueous antioxidant. We did this study to determine the extent of lipid peroxidation by assessing MDA levels and to investigate the alterations in uric acid levels in malaria and to establish a correlation between MDA and uric acid levels..

## Materials and Methods

A case control study was done - 30 controls and malaria smear positive patients. Uric acid by the enzymatic method and Malondialdehyde by the Thiobarbituric acid (TBA) was measured in cases and controls. Data were analysed by unpaired "t" test.

## Results

Lipid peroxidation was increased in malaria patients (p<0.001) compared to control subjects. The uric acid levels were lower in malaria patients compared to controls; the difference was not statistically significant. The MDA levels were high in malaria patients when compared to controls and was statistically significant .There was negative correlation between MDA and uric acid levels in malaria.

## Conclusions

Physicochemical changes in the membrane of the erythrocyte induced by oxidative stress are responsible for membrane lipid peroxidation which in turn is responsible for increased level of antioxidants in order to counteract lipid peroxidation effects.

## Key Words

lipid peroxidation, antioxidants,malaria, oxidative stress

## Uric Acid in Serum and Urine in Type 2 Diabetes Mellitus, and Correlation with Glycated Hemoglobin, Albuminuria and Lipid Profile

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### Introduction

Diabetes has become a major health challenge, worldwide. There is a need for sensitive biomarkers to detect and screen for diabetes-induced complications at an early stage. Recently attention is given to uric acid as marker as well as risk factor for diabetic complications. The present study aimed to estimate uric acid level in serum and urine in diabetic patients, and correlate uric acid level with microalbuminuria, urinary protein : creatinine ratio, glycated hemoglobin and serum lipid profile..

### Materials and Methods

We measured glycated haemoglobin, lipid profile and uric acid and analysed urine samples for protein, creatinine, and microalbumin in patients with clinically diagnosed diabetic patients (n=18) and healthy controls (n=18). The data were analysed using Student's "t" test and Karl Pearson's Correlation analysis.

### Results

Diabetic subjects with macroalbuminuria (n=18) showed significantly higher levels of serum uric acid, fasting plasma glucose, glycated hemoglobin (HbA1c), serum triglycerdies (TG), total cholesterol (TC), LDL cholesterol, urine uric acid, urine protein to creatinine ratio, lower serum HDL when compared to normoalbuminuric controls. Diabetic subjects with microalbuminuria (n=18) showed significantly higher levels of serum uric acid, fasting plasma glucose, HbA1c, serum TG, TC, LDL cholesterol, urine uric acid, urine protein to creatinine ratio, and lower serum HDL when compared to normoalbuminuric controls. Diabetics with macroalbuminuria showed significantly higher levels of serum uric acid, fasting plasma glucose, HbA1c, TG, urine uric acid and urine protein to creatinine ratio when compared to diabetics with microalbuminuria. In diabetic subjects with macroalbuminuria and microalbuminuria, there was significant positive correlation of serum uric acid with urinary uric acid, albuminuria and urine protein: creatinine ratio; also, urinary uric acid correlated positively with albuminuria and urinary protein: creatinine ratio.

### Conclusions

Significant elevations of serum and urinary levels of uric acid are observed in type 2 diabetes mellitus. Significant positive correlation of uric acid with albuminuria and urine protein: creatinine ratio suggests its potential use in prognosis and therapeutic follow up of diabetic nephropathy.

### Key Words

diabetes, uric acid, glycated haemoglobin,biomarker

## Analgesic effect of commonly used Antimicrobials using Analgesiometer

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### Introduction

Pain is the commonest symptom that takes the patient to the doctor. In medical practice, pain is often associated with infection and inflammation. Azithromycin mediates anti-inflammatory activity through the inhibition of the transcription factor NF-kappa B. Certain macrolide antibiotics exert anti-inflammatory and immune modulating effects beyond their purely antibacterial action, as has been demonstrated in a number of bronchial inflammatory disorders such as diffuse panbrochiolitis. We planned to analyse the analgesic activity of these and other commonly used antimicrobials using analgesiometer and tail-flick method of evaluation..

### Materials and Methods

Male albino mice were used for this study. The method employed was rat-flick method using analgesiometer. A total of 12 albino mice were used weighing between 20-30 gms. Their baseline reaction time to pain was recorded. Drug and their doses (mg/kg) used: Amoxicillin (10, 20, 30), Cefadroxil (10, 15, 20), Erythromycin (10, 15, 20), Ciprofloxacin (10, 15, 20), Tetracycline (10, 15, 20). Different intra-peritoneum doses of the given drug were used in each group for their possible analgesic effect. Reaction time was noted half an hour after injecting the drug. When the reaction time was not obtained up to 30 seconds the drug was considered as having a probable analgesic effect. The data was then analysed using student's paired t-test.

### Results

All antibiotics led to significant change in the reaction time after the test dose. Amoxicillin: $p < 0.0001$; Cefadroxyl: $p < 0.0001$; Erythromycin: $p < 0.01$; Ciprofloxacin: $p < 0.0001$; Tetracycline: $p < 0.01$.

### Conclusions

Amoxicillin and Cefadroxil can be preferred over other drugs when infection, pain and inflammation occur together. NSAIDS recently used for pain and inflammation

have a lot of adverse effects on the gut. An analgesic – antimicrobial can benefit patients with inflammatory pain.

## Key Words
Analgesic, Antimicrobials, Pain, Anti-inflammatory

## Predictors of Poor Neonatal Outcome in Babies Born with Meconium Stained Liquor
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## Introduction
Meconium Aspiration Syndrome (MAS) continues to be threat to many newborns throughout the world with a case fatality rate of 5% to 40%. India has the unfortunate distinction of claiming more than a quarter of the total newborn deaths in the world. Meconium stained amniotic fluid complicates delivery in approximately 8% to 15% of live births. Meconium aspiration syndrome accounts for high morbidity and mortality ranging from 28-40%. In resource poor countries where electronic monitoring is not available, it is difficult to predict the fetal outcome. This study was planned to examine the antenatal, intranatal factors responsible for MSL and markers for early fetal mortality and morbidity..

## Materials and Methods
We prospectively enrolled 100 neonates from a neonatal care unit delivered through MSAF. We excluded participants if they were born with MSAF and had significant congenital abnormalities. History of babies and mother with MSAF was noted with special emphasis on antepartum and intrapartum risk factors, need of resuscitation, need for NICU admission, consistency of meconium etc. Morbidity and mortality of neonates were noted with emphasis on MAS, respiratory distress, asphyxia, sepsis, growth retardation, gestational age, and weight.

## Results
During study period of 2 months, there were 1113 live births, out of which 100 babies (8.9%) were born with MSAF. Out of 100, 24 babies were admitted to NICU and mean duration of NICU stay was 4 days. Most babies were delivered through thin MSL(44%) followed by thick (35%) and moderate (21%).Most common indication for NICU admission were birth asphyxia (16%) and MAS (6%) . Nine babies died:  all had thick meconium with severe birth asphyxia; 2 had septicaemia with DIC and 1 had NIH. Ninety one babies were more than 37 weeks of gestational age and 57 had birth weight over 2.5 Kg. Nineteen babies

were non vigorous requiring tracheal suctioning and positive pressure ventilation at birth. Common mode of delivery was emergency Cesarean in 83% patients. Common maternal and fetal risk factors were fetal distress (30%) followed by oligohydramnios (30%), pregnancy induced hypertension (24%), anemia (14%), severe anemia (5%), Antepartum hemorrhage (4%) and antepartum eclampsia (4%).

## Conclusions
Oligohydramnios, PIH, anemia and fetal distress were common antenatal and intranatal factors associated with MSAF. Major morbidity and indication for NICU admission was Birth asphyxia and non-vigorous babies. Mortality rate was 9% which is commonly associated with thick meconium and severe birth asphyxia.

## Key Words
Neonatal outcome,Meconium stained liquor

## Assessment of stigma and insight in schizophrenia patients and relationship with treatment compliance
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## Introduction
Despite recent treatment advances in the past 50 years, those suffering from schizophrenia face a considerable stigma that limits access to treatment and hinders their full integration into society. There are a very few studies exploring stigma of schizophrenia and treatment compliance. Hence  to explore this possibility we conducted a study with the following objectives: to  assess a) level of stigma in schizophrenia patients b)  level of insight and self-esteem and its relation with stigma score c) level of stigma and correlation with treatment compliance.

## Materials and Methods
The Ethics Committee approval was obtained before the beginning of the research.  100 patients with schizophrenia were recruited in our cross-sectional study conducted over a period of two months. Patients were assessed for insight, stigma and self-esteem and relevant scores were obtained using SAI scale, STIGMA scale and ROSENBERG scale. Compliance was assessed by brief interview. Patients were grouped into compliant and non-compliant  treatment group; the two groups were compared with statistical tests.

## Results

Stigma scores for treatment compliant group was 66.4 (SD-11.98) and for non- compliant group was 60.47(SD12.32).Insight score for treatment compliant group was 7.67(SD-1.81) for treatment non- compliant group was 6.33(SD-2.49). Self-esteem scores were 16.17(SD- 2.68) for treatment compliant group and 17.23(SD-2.06) for treatment non-compliant group

## Conclusions

What we found in our study is in conclusion with literature on insight and compliance that increased insight predicts better compliance with treatment. Stigma score were higher in compliant with treatment group, suggesting positive correlation. Higher education predicts better compliance. Self-esteem is negatively correlated with stigma. As Stigma about mental illness may determine how and even whether people seek help for mental health problems, their level of engagement with treatment and the outcome of their problems , we believe that our study may contribute usefully to our understanding of processes that affect help-seeking, treatment uptake and outcome of mental illness.

## Key Words

Stigma, Insight, Treatment compliance, Schizophrenia

## Awareness in the Community Regarding Health Hazards of Tobacco Use
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## Introduction

Tobacco consumption and tobacco related diseases are emerging as a burgeoning public health problem. Hence, the present study was undertaken to assess the knowledge and attitude of the urban community regarding health hazards of tobacco and to estimate the prevalence and pattern of tobacco consumption in urban community..

## Materials and Methods

Present cross sectional study was carried out in urban field practice area of GMC, Nagpur in May-June 2011 on 590 subjects in age group 15-60 years. Data was collected by house to house survey by interview technique using predesigned and pretested questionnaire.

## Results

The prevalence of tobacco consumption was found to be 34.06%; 28.81% used smokeless form of tobacco and 3.34% were smokers. The knowledge of the study subjects regarding health hazards of tobacco use was high with >70% of individuals knowing that tobacco consumption can cause oral cancer, lung cancer, etc. Commonest perceived reasons for tobacco consumption were peer pressure and style statement. Attitude towards stopping tobacco consumption was positive. Mean age of initiation of tobacco consumption was 22.62 years. Curiosity to experiment and peer pressure were the major reasons cites for initiation of tobacco consumption. The awareness regarding legal norms of tobacco use was poor.

## Conclusions

Although the awareness regarding health hazards is high the practice of tobacco consumption is quite prevalent. The positive attitude of subjects towards quitting is an encouraging feature. Further studies are required for examining the primary and secondary reinforces operating in the community which tends to maintain the tobacco consuming behavior.

## Key Words

Tobacco, Community, Health, Cancer, Smoking

## Perioperative Antimicrobial Preference in ENT Department of Tertiary Care Hospital
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## Introduction

Antimicrobial prophylaxis is effective in reducing the incidence of postoperative wound infection. But inappropriate and indiscriminate use of antimicrobial agents leads to emergence of antimicrobial resistant organisms, increased adverse drug reactions and high cost of therapy. To resolve the issues of overuse and misuse of antimicrobial agents, teaching hospitals can standardize perioperative antimicrobial usage for routine surgical procedures of ENT department. Objectives –1) To study the current preference for antimicrobials for surgical cases. 2) To study practice variation between the surgeons of same department..

## Materials and Methods

A cross sectional survey is proposed by using questionnaire for faculty of ENT department of Government Medical College, a Tertiary care hospital of central India. The faculty and post graduate students are included in the study to know their preference of

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perioperative antimicrobials for commonly performed surgeries in ENT department.

## Results

Third generation cephalosporins were the most preferred antimicrobial for all types of surgeries followed by quinolones. In nasal septal surgeries preoperatively, 90% of postgraduate students preferred antimicrobial prophylaxis, while the senior surgeons did not. Postoperatively 65% of all preferences were in the form of combination of two or three antimicrobials. Most common cause for change of antimicrobial during post op period was occurrence of post op infection. Opinion of surgeons about Institutional antimicrobial guidelines reveal that surgeons are in favour of flexible guidelines.

## Conclusions

Antimicrobial audit programme can help in formulating Institutional Guidelines for antimicrobial usage.

## Key Words

perioperative,antimicrobial,ENT surgeries,preference

## Evaluation ORS Plus Zinc Supplement In Controlling Diarrhoea In Paediatric Patients
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## Introduction

Diarrhea causes an estimated 2.5 million child deaths in developing countries each year, 35% of which are due to acute diarrhea. Dietary zinc insufficiency is exacerbated during diarrheal episode by net Zinc loss in the stool. Zinc supplementation exhibits therapeutic action by facilitating transport of water and electrolytes across the intestinal mucosa, preventing villous atrophy and improving overall immunity. Objective: Our objectives were to evaluate the efficacy of Zinc supplementation when given with standard ORS treatment to children with acute watery/bloody diarrhea..

## Materials and Methods

This double-blind, randomized, placebo-controlled trial was done in children aged 6 months to 59 months attending the Pediatric OPD and IPD at Index Medical College Hospital and Research Centre, with more than three unformed stools in the prior 24 hours; duration of diarrhea up to 72 hours; and ability to accept oral fluids or feeds. Children who were severely dehydrated as per the World Health Organization (WHO) criteria and unable to accept treatment orally were rehydrated with Ringer's lactate and reviewed 4 hours later for ability to take orally. The children were screened for eligibility. The exclusion criteria were: chronic or severe complicating illness, known positive HIV status, PEM. Total 60 patients with acute diarrhoea were equally divided into 3 groups (n=20) placebo, zinc only and zinc plus ORS treatment groups. The syrup was a 20 mg dose of zinc acetate prepared in 5 ml syrup to be given once a day for 14 days regardless of the duration of diarrhoea. Diarrhoea duration and severity were the primary outcomes.

## Results

Duration of diarrhoea reduced up to 29% by Zinc plus ORS group than 15% and 6% with Zinc only, placebo groups respectively. There was significant reduction in stool volume (30%) with Zinc plus ORS group than placebo group. Duration of diarrhea and total stool output during an episode of acute diarrhea were significantly different in the supplemented and placebo groups. Serious adverse events were not observed, but vomiting was more common in zinc-treated children with acute diarrhoea.

## Conclusions

Significant beneficial impact of Zinc supplementation with standard ORS treatment on the clinical course of acute diarrhea: reduces both severity and duration.

## Key Words

ORS , Zinc supplement ,acute diarrhea

## Critical Evaluation of Obstructive Sleep Apnea in School Going Children Before and After Tonsilloadenoidectomy
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## Introduction

Obstructive sleep apnea (OSA) is the most common type of sleep apnea caused by resistance to the upper airway. Etiology mainly includes adenotonsillar hypertrophy, common in children. Consequences of untreated OSA include witnessed apneic episodes, failure to thrive, enuresis, attention-deficit disorder, behavior problems, poor academic performance and can lead to cardiorespiratory failure. Tonsilloadenoidectomy is successful in solving sleep problems for 80 to 90% of children. We did this study to compare quality of life of school-going children before and after

tonsilloadenoidectomy..

## Materials and Methods

A comparative, retrospective cohort study of 50 students of age group from 3-10 years who underwent tonsilloadenoidectomy for treatment of sleep-disordered breathing or recurrent tonsillitis in a private clinic based otolaryngology practice or a Government hospital in a metropolitan area. Questionnaires such as the Epworth Sleepiness Scale and OSA-18 were asked to be completed by the caregivers of the subjects, pre- and post-operatively.

## Results

1. Epworth Sleepiness Scale, subjects in normal range increases from 26% to 98%; those requiring intervention decreases 74% (p= < 0.001). 2. Quality Of Life questionnaire, subjects having small adverse impact on quality of life increases from 20% to 94%; moderate adverse impact from 32% to 6%; large impact 48% to 0%. (p = < 0.001)  3. Pediatric Sleep Questionnaire, subjects giving < 8 positive response increases from 36% to 98%, subjects giving > 8 positive responses decreases from 64% to 2% ( p = < 0.001).

## Conclusions

We found improvement in the quality of life of the subjects, after the surgery. OSA in pediatric age group, due to adenotonsillar hypertrophy, should be first treated by conservative treatment such. If OSA persists, opt for an adenotonsillectomy. In most patients, positive effects are visible after short period of time.

## Key Words

obstructive sleep apnea syndrome, tonsilloadenoidectomy in children, quality of life after tonsilloadenoidectomy

## Impact of Awareness about Hypertension on Compliance to Antihypertensive Medication
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## Introduction

Hypertension is a commonest cardiovascular disorder, posing a major public health challenge. Effective treatment requires good patient compliance, absence of which leads to therapeutic failure and increased burden of the disease. This study is proposed to see the effect of creating awareness about hypertension on compliance to antihypertensive medication, as persistence and improvement in compliance is one of the important determinants in achieving favourable therapeutic outcomes..

## Materials and Methods

We enrolled outpatients known to have high blood pressure for at least 3 months and on antihypertensive drugs from the Cardiology department of a tertiary care teaching hospital from June to August, 2011. After informed consent, patients were interviewed using a questionnaire to measure compliance to antihypertensive medication, and blood pressure was recorded, both before and 4 weeks after being educated about hypertension and its complications.

## Results

We enrolled a total of 40 patients, out of which 32 patients completed the study. There was no statistically significant difference in the mean age, sex distribution, literacy, urbanization, marital status, and economic status, duration of hypertension or drug procurement in compliant and non-compliant patients. A significant increase in compliance (59% to 84%) and decrease in uncontrolled hypertension (59% to 25%) was found after creating awareness about hypertension and its complications. After the study patients received health education, their adherence to antihypertensive medications increased. Also, patients who had stopped consuming BP lowering pills began to adhere to therapy.

## Conclusions

There is a significant beneficial impact of awareness about hypertension on compliance to antihypertensive medication, which may ultimately help in reducing the morbidity and mortality due to raised blood pressure and its complications.

## Key Words

Hypertension, Compliance, Antihypertensive, Medication

## Prevalence of Undetected Type 2 Diabetes in a Rural Community of South India
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## Introduction

Type2 diabetes is common and under-diagnosed, often present late with complications, particularly in rural areas due of lack of awareness and resources. Prevalence of

diabetes is 9-16% in India, in rural areas varies from 3.1-6.4%. There is little consensus about the effective means of screening for diabetes in developing countries and only few studies available regarding the prevalence of undetected diabetes. The value of Random Capillary Blood Glucose (RCBG) for screening of diabetes has been validated in Asian Indians and is a convenient way to reach large populations. A study was undertaken to assess the prevalence of undetected diabetes in a rural community of Davangere district in south India..

## Materials and Methods

The study was a cross-sectional one involving 1412 subjects, >25years of age of both sexes who underwent RCBG. Of these 86 were known diabetics. 1326 had no h/o diabetes, out of which 37 were found to be hyperglycemic (>200mg/dl) by RCBG. A spot venous sample for HbA1c (H.P.L.C method) was collected in 33 subjects, 4 subjects underwent OGTT in fasting state and their family h/o diabetes, blood pressure, BMI, Waist-Hip Ratio (WHR) were recorded. Prevalence was presented as percentage with 95% Confidence Interval (95% CI) and the rate was compared by Z-test for proportions.

## Results

In 1326 subjects, 37(2.8%) were found to be hyperglycemic, and 26 (70.3%) were confirmed to be diabetics as per WHO criteria, giving a point prevalence of undetected diabetes of 2.0% (95%CI:1.2-2.8%), males being 12 out of 514 (2.3%,95%CI: 0.9-3.7) and females being 14 out of 812 (1.7%,95%CI: 1.2-2.2%) with a M:F ratio of 1.4:1. These confirmed cases were found to be positively correlated with increasing age, male sex, WHR and B.P. The prevalence of known diabetics was 6.1% with M:F ratio of 2.2:1.

## Conclusions

Study revealed a point prevalence of undetected diabetes as high as 2%, community based screening by RCBG is an effective method for early detection, to create awareness and hence to prevent diabetic complications.

## Key Words

Screening, undetected diabetes, prevalence, rural-India

## Use of non-prescribed antibiotics for the treatment of acute respiratory infections in urban under-five children: A cross-sectional study

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## Introduction

The emergence and spread of resistance to antibiotics due to their irrational use is a major public health problem world-wide. The rampant increase in drug-resistant Streptococcal Pneumoniae is of particular importance to pediatricians as it may cause diseases like pneumonia, bacterial meningitis and otitis media in children. It has been estimated that around the world every year more than 50% of antibiotics are purchased without a prescription. The scenario in developing countries is of particular importance due to the inadequate regulation of the distribution and sale of prescription drugs. Therefore this study was undertaken to estimate the prevalence of non-prescription use of antibiotics for treatment of acute respiratory infection in children less than 5 years of age in urban community of Belgaum..

## Materials and Methods

A community based cross sectional survey will be undertaken during the period of March-May 2012 in Ashok Nagar urban health centre area of Belgaum which covers a population of 4300. It consists of 780 households. 200 mothers of children aged 0-5 years who are residing in that area will be interviewed with the help of a structured questionnaire using systematic random sampling technique. Every third house will be chosen

## Results

200 mothers of children less than five years of age who were residing in that area were interviewed. 63% of mothers had used non-prescribed antibiotics to treat symptoms in their child during the previous 6 months while 22% of the mothers made use of left over antibiotics that were previously prescribed by a physician. Symptoms commonly treated were cold or flu (84%), fever (69%), cough (63%) and nasal discharge (46%). Furthermore 83% of the study participants stored antibiotics at home, out of which Ciprofloxacin was the most commonly stored drug and was exclusively stored in 24% of households and along with other drugs (i.e. Ofloxacin, Amoxicillin, Metronidazole, Azithromycin and Roxithromycin) in 36% of households. Pharmacies were the main source (53%) of non-prescribed antibiotics.

## Conclusions

The prevalence of non-prescribed antibiotic use for children less than 5 years of age was high in the study area. Because such use leads to wide spread antibiotic resistance and other associated complications, our findings have important implications for public education and the enforcement of regulations regarding the sale of antibiotics in our country.

## Key Words

resistance to antibiotics,irrational use,non-prescription use,acute respiratory infections,under five children

## Effect of maternal oxytocin on newborn bilirubin levels: A Prospective observational study

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## Introduction

Jaundice is an important problem in the first week of life. Although mild jaundice of the newborn is accepted as normal, severe or prolonged jaundice may be toxic to the developing central nervous system and may cause neurological impairment even in term newborns. Many of these newborns have high bilirubin levels needing phototherapy and no discernible cause can be found. Often they are said to have exaggerated physiological jaundice and discharged. Oxytocin is often administered intravenously to induce or accelerate labour in the obstetric units; we have felt the need to make a critical appraisal of this possible relation between the administration of oxytocin to mother and level of bilirubin in the neonate.

## Materials and Methods

Prospective observational study. Study duration: 2 months. Study set up: JSS Hospital, maternal and child health department Inclusion criteria: Term babies. Exclusion criteria: birth asphyxia, respiratory distress needing admission and management in NICU Sepsis, major congenital anomalies Number of babies needing treatment for jaundice as per AAP guidelines were compared between two groups. Chi-square with Fischer exact test was used to compare proportions. Intervention: Term babies born to mothers who received oxytocin and who did not receive oxytocin were recruited into two groups (Group A and Group B). Cord blood bilirubin and subsequently serum bilirubin at 24, 48 and 72 hour intervals was estimated for comparison. Baseline parameters, serum bilirubin levels and treatment needed for raised bilirubin levels was noted.

## Results

The serum bilirubin values in the babies whose mothers received oxytocin (group A) are significantly higher at birth, at 24, 48 and 72 hours of age [2.21 ± 0.71 vs. 1.75 ± 0.36mg/ dL (P= 0.04), 8.00 vs. 5.30 mg/dL (P=0.001), 12.08 vs. 7.46 mg/dL (P=0.001), 14.48 vs. 8.60 (P=0.001), respectively]. The mean total serum bilirubin was high in cord blood of the babies whose mothers received oxytocin. The mean difference was only 0.46 mg/dL which, though statistically significant, is clinically ignorable. Following the trend the next 72 hours revealed a significant rise of bilirubin in this group which has both statistical and clinical significance. The number of babies

requiring phototherapy in both groups does not meet statistical significance.

## Conclusions

Neonatal jaundice in term babies without discernible cause on routine investigations is mainly due to transplacentally transferred oxytocin.

## Key Words

maternal oxytocin, newborn bilirubin, neonatal jaundice, oxytocin, labour

## Intraoperative Utility of Squash Cytology in Space Occupying Lesions of Central Nervous System-Cytohistopathological Study

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## Introduction

In neurosurgical practice, a rapid pathological diagnosis of lesions of central nervous system helps surgeon to plan the extent of surgery and modify it accordingly. Squash smear cytology has emerged as diagnostic tool for rapid diagnosis over the traditional frozen section technique. OBJECTIVES: 1.To study various patterns of central nervous system lesions in squash cytology and histopathology. 2.To correlate cytological diagnosis with histopathology. 3.To evaluate the diagnostic utility of intraoperative squash cytology..

## Materials and Methods

In the present study, 80 cases were analyzed. Squash smears were prepared from biopsy samples sent in isotonic saline. The smears were stained by Hematoxylin and Eosin [HandE] and Papaniculou [PAP] stain. Histopathological evaluation was done subsequently from biopsy samples sent in formalin. H and E staining was done. Special stains were performed in special cases. Cytomorphological features were correlated with histopathology.

## Results

Histopathological diagnosis of fifty cases included neoplastic lesions[83.75%] and non-neoplastic lesions [16.25%].Neoplastic lesions constituted Astrocyte tumors [23.75%],Meningeal tumors [15%],Nerve tumors [12.5%],pituitary neoplasms [7.5%],Metastatic tumors[7.5%],Embryonal tumors [3.75%], Oligoastrocytic tumors [2.5%],Unclassified tumors [3.75%],Craniopharyngioma[2.5%],Oligodendroglial

tumors[2.5%], Hematolymphoid tumors[1.25%] and Ependymoma [1.25%]. Non-neoplastic conditions included Cystic lesions[5%],Inflammatory lesions[6.25%],Vascular lesions [1.25%] and Unclassified tumors [3.75%].Cytological diagnosis was offered in 73 cases [91.25%].Correct diagnosis was achieved in 49 cases [67.12%] with complete correlation. However diagnostic accuracy improved considerably [82.19%] when partial correlation was considered.

## Conclusions

Squash cytology is a reliable, rapid and inexpensive intra-operative diagnostic tool. Inadequate and improper samplings are important contributory factors for misdiagnosis.

## Key Words

Neurosurgical,Squash cytology,Histopathology,Intraoperative,Diagnostic accuracy.

## Awareness of Basic Life Support and Cardio-Pulmonary Resuscitation among Medical, Dental and Para-Medical Students

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## Introduction

Cardiac arrest is associated with very high mortality. Many lives can be saved by simple manoeuvres and basic life support (BLS), cardiopulmonary resuscitation and defibrillation with an automated external defibrillator (AED) Practical skills are highly important for CPR without which it would cost patients' lives. Although medical students and health professionals are expected to know about CPR, most medical students lack enough knowledge and skills to practice CPR. This study aims to assess the awareness of BLS and CPR among the medical and para-medical students..

## Materials and Methods

We conducted a cross sectional study among medical, dental and nursing students of JSS Medical College and nursing institutes, Mysore, Karnataka, India. A questionnaire was given regarding awareness and skills involved in BLS and CPR. AED and EMS (Emergency Medical Services), assessment and resuscitation techniques with regard to airway, breathing, circulation, techniques regarding removal of foreign body obstruction, recognition of early signs of stroke and acute coronary

syndrome. The results were analysed using an answer key prepared from recent Advance Cardiac Life Support Manual.

## Results

No responders had complete knowledge of BLS. Out of 500 only 33 (6.6%) have secured above 80%, 147 (29.4%) between 60-80%, 250 (50%) between 40-60%, 67 (13.4%) between 20-40% and 3 (0.6%) below 20%. About half the respondents did not know the first step in BLS and most did not know the right sequence of steps to be carried out. Amongst the situation based questions asked, most did not know what step to take in case of an emergency, like choking, drowning etc.

## Conclusions

Medical students lack enough knowledge and skills to practice CPR with confidence.

## Key Words

awareness, BLS, CPR, cardiopulmonary resuscitation

## Clinical Study of Common Bile duct Stones with Special Reference to Endoscopic Management

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## Introduction

The incidence of concomitant common bile duct stones varies between 8% and 20%. Common bile duct management has been a challenge to the surgeons since time immemorial, with gaining expertise in procedure like ERCP which is considered as the first and promising approach to this problem. The CBD stones are managed either by ERCP or surgery. Our study is an effort to categorize patients with CBD stones to be intervened either by ERCP or surgical procedures with an objective to study the efficacy of endoscopic and surgical management of CBD stones in terms of outcomes, morbidity and mortality..

## Materials and Methods

This is a prospective study of 60 patients with CBD stones admitted in JSSH undergoing treatment either by ERCP, open and laparoscopic CBD exploration, the various outcomes, morbidity and mortality between these procedures have been compared and inferred.

## Results

Pain and jaundice were the predominant symptoms. Imaging modality for diagnosis of CBD stones is exclusively USG with CT scan in selected cases. Out of 60 patients, 59 underwent ERCP and in 45 complete clearance of CBD stones were possible. Eight patients had failed ERC, out of which 4 had stones measuring more than 12 mm and multiple, 2 had impacted stones and 2 had edematous papilla. The common complications with ERCP are pancreatitis, sepsis and cholangitis. 14 patients underwent open CBD exploration and stones were extracted successfully in all. The complications associated with this are wound infection, bile leak, sepsis and cholangitis. Laparoscopic CBD exploration and stone extraction was achieved in one patient.

## Conclusions

The management of CBD stones with regard to either ERCP, open or laparoscopic CBD exploration is to be decided on certain factors like size, number, local inflammatory pathology or impaction. ERCP should not be considered as gold standard in all CBD stone diseases.

## Key Words

CBD stones, ERCP, jssh, surgical management

## Electrocardiographic and coronary angiographic correlation of coronary artery involvement in cases of acute myocardial

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## Introduction

Myocardial infarction (MI) is a major public health problem with significant mortality, morbidity, and healthcare costs. Electrocardiogram (ECG) is mainstay in the evaluation of MI: it can rule in or rule out MI as well can help physicians make intelligent guess about the culprit coronary artery causing MI. The aim of the study was to assess the accuracy of ECG in identifying the artery involved in myocardial infarction..

## Materials and Methods

The present study is conducted at AVBR Hospital, Sawangi (Meghe), Wardha. All cases of myocardial infarction attending the hospital were included in the study. Total of 30 cases are included. The possible artery involvement was predicated on ECG. The coronary angiography was carried out in all cases as soon as the patient's hemodynamic condition settled and the culprit artery was identified. The correlation of predicted artery involvement of ECG and the culprit artery on angiography was done. The results were analyzed using students' test.

## Results

Out of 30 cases 14 cases (46.7%) had anterior wall MI, 13 cases (43.3%) had inferior wall MI. Among the anterior wall MI cases correlation of CA with ECG is possible in 76.9%. Correlation in cases of inferior wall MI was 75%. A correlation of LAD was found to be 76.9% and RCA 75%. Correlation of LCX involvement and multiple blocks in ECG and CA was not possible.

## Conclusions

ECG can predict the artery involved in MI.

## Key Words

MI, ECG, Angiography,correlation

## Significance of Family History in Occurrence of Carcinoma Breast

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## Introduction

Breast cancer is most common disease in middle aged women in western countries. It is the second leading cause of carcinoma death. The prevalence of woman with a family history of carcinoma breast has been estimated to range from 5% to 19%. About 25% of familial cancer can be attributed to two highly penetrant autosomal dominant genes: BRCA1 and BRCA2. The risk of carcinoma breast increases with the number of affected first degree relative. Not only has the genetic constitution in hereditary breast cancer, but family history also contributed to the age of menarche and menopause and the similar lifestyle of mother and daughter are also contributing factors. We did this study to create awareness among poor women about breast cancer and to screen high risk women for breast cancer..

## Materials and Methods

In the surgery department of Acharya Vinoba Bhave Rural Hospital, Sawangi (Meghe), Wardha, we enrolled 40 women, aged between 30 and 60 years who were interviewed and examined over 2 months. A structured survey with personal interview as a contact method was carried out.

## Results

40 breast cancer patients were admitted to general

surgery from 1-03-2012 to 1-05-2012. The incidence of breast cancer in 1st degree relatives was found to be 7.5 % (3 out of 40). 65% female gave history of late menarche (16-17yrs) and early menopause (40-45yrs).

## Conclusions

Screening can help detect early breast cancer in women with high risk.

## Key Words

Carcinoma Breast awareness, early diagnosis and treatment

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## Comparative Study between L-Lysine and Regular Dressing in Diabetic Foot Ulcers: An Open Label Pilot Study
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## Introduction

Diabetes mellitus is recognized as an epidemic in the Asian sub-continent affecting nearly 25 million in India alone. The present study assumes significance in the Indian context where the disease itself is detected late, and also there is little awareness for foot care in patients causing a significant delay in seeking treatment..

## Materials and Methods

Open label pilot study over a period of two months on patients with diabetic ulcers on lower limb admitted in Dr Prabhakar Kore Hospital and Medical Research Centre, Belgaum, Karnataka. A written informed consent was taken and the patients randomly allocated into two groups of 15 patients each in control group(regular dressing) and lysine group(dressing with jelly containing L-lysine).The %reduction of area of ulcer was calculated.

## Results

The two groups were studied for the effect of conventional dressings and L-lysine dressings on wound reduction. A total of 30 patients randomized, analysis was done using't' test and chi square test.

## Conclusions

The final area reduced and percentages of area reduced were statistically significant in the L-lysine group as compared to the control group. This study shows that L-lysine dressing is safe and effective in treating diabetic foot ulcers.

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## Study of Predisposing and Associated Risk Factors with Pregnancy induced Hypertension (PIH) in Women at Rural Hospital
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## Introduction

Understanding the mechanism of factors responsible for pregnancy induced hypertension (PIH) as well as early risk assessment is still a major challenge. PIH is defined as blood pressure >= 140/90mm Hg with or without oedema developing after 20 weeks of gestational period during pregnancy, labour or the puerperium in previously normotensive non-proteinuric women. PIH occurs in 5-10% of all pregnancies and is one of the leading causes of maternal and fetal mortality and morbidity in India, ranked as second direct cause of maternal mortality after haemorrhage..

## Materials and Methods

It was a hospital based prospective case control study conducted in the department of Obstetrics and Gynaecology at Acharya Vinoba Bhave Rural Hospital, Sawangi, Wardha. Fifty women with PIH along with fifty normotensive women with > 20 weeks of any gravida as control were included. History and investigation of PIH were studied. The data were analysed using Excel and SPSS.

## Results

Risk factors of PIH were maternal age > or = 35 years, nulliparity, pregnancy body mass index > or = 30 kg/m2, multiple pregnancy, history of PIH in previous pregnancy. On the other hand, maternal age < 20 years and pre-pregnancy body mass index < 20 kg/m2 were significant protective factors for PIH. Significant risk factors for PIH in a second pregnancy included chronic hypertension, diabetes mellitus, obesity and inadequate prenatal care. A history of PIH conferred the highest risk for PIH in the second pregnancy; the risk was inversely proportional to gestational age at delivery of the first pregnancy.

## Conclusions

PIH is associated with high maternal and fetal mortality. Obstetricians must identify women at risk of developing PIH and treat the disorder effectively to reduce the maternal and fetal morbidity and mortality.

## Key Words
Predisposing, Risk Factor, PIH, Prospective

## Correlation between MRI findings and the clinical symptoms of low back pain (LBP).

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### Introduction
Low backache has enormous etiological factors broadly classified into mechanical, non-mechanical. MRI has become gold standard for diagnosis of mechanical and non-mechanical causes of low backache. The clinical relevance of various abnormal MRI findings in the lumbar spine is unclear. There are several disc-related and bone-related abnormalities that can readily be observed on lumbar MRI, including reduced signal intensity, irregularities of the nucleus's shape, reduced disc height, annular tears (AT), high intensity zones (HIZ), changes in disc contour (bulging, protrusion, extrusion, and sequestration), nerve root compromise, endplate irregularities, Modic type changes, central and foraminal stenosis, degeneration and asymmetry of Z- joints, and anterolisthesis and retrolisthesis..

### Materials and Methods
Lumbar spine MRI was obtained in 114 individuals at AVBRH hospital during last one year. Predefined abnormal MRI findings were interpreted without any knowledge of patient symptoms. Associations between MRI abnormalities and LBP were calculated.

### Results
Most abnormal MRI findings were found at the lowest lumbar levels. Irregular nucleus shape and reduced disc height were common (>50% of individuals).

### Conclusions
MRI findings of disc protrusion, nerve root displacement/compression, disc degeneration and HIZ are all associated with LBP, but individually, none of these abnormalities provides a strong indication that LBP is attributable to underlying pathology. This limits their value in refining epidemiological case definitions for LBP.

### Key Words
MRI, low back pain, degenerative spine

## Assessment of Functional Capacity of Offsprings of Hypertensive Versus Nonhypertensive Parents by 6- Minute Walk Test.

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### Introduction
Hypertension is one of the commonest worldwide disease afflicting humans. It is a multifactorial disease influenced by environmental and genetic factors. Identification of environment risk factors has led to the treatment of disease, our knowledge of its heritability is very limited to the predictive importance of a positive family history or to the observation of familial segregation. Aim: To investigate the effects of parental hypertension in the children of hypertensive parents through 6- minute walk test using 6 minute walk distance (6MWD) . The six minute walk test is an objective measure of functional exercise capacity in individuals. This test records the distance (6MWD) an individual is able to walk along a flat 30 m walkway over 6 minute period, with breaks as required..

### Materials and Methods
We evaluated the physical functional capacity of 50 offsprings (age 18-25 years) of hypertensive and normotensive parents. Subjects walked along 30 m long college corridor at their own pace in 6 minute. We measured heart rate, blood pressure, before and after 6MWT and .distance covered (6MWD) and used Borg scale to assess dyspnea and fatigue.

### Results
The 6MWD covered and the $VO_2$max consumed by the offsprings(males and females(considered separately)) of hypertensive parents is less than the normotensive parents

### Conclusions
The functional capacity of study group is less than that of control group. Therefore, study group should adopt lifestyle modification and primary prophylaxis to avoid the risk of developing hypertension in future.

### Key Words
Functional capacity,Hypertension,Six minute walk test,6MWD,Borg scale,$VO_2$ max.

## Change in knowledge and attitude of secondary schools teachers towards reproductive health education after training programs in rural schools of Wardha district

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## Introduction

Adolescents in India as in other countries of the world are facing many reproductive health problems nowadays. Some of these problems are high rate of high risk-sexual activities, unwanted pregnancy, abortion, STIs/HIV/AIDS and school drop-out. These studies were mainly carried out in African countries particularly Nigeria. In India there are very few studies done on this topic in spite of similar behavioral patterns found in rural as well as urban youth. Parents, teachers and peer group can create a good amount of awareness among youth regarding the sexual and reproductive health of the younger generation and thus have a positive impact on the social development of our country..

## Materials and Methods

The study was carried out among the teachers of approximately 10 rural secondary schools in Wardha district of Maharashtra; India. The study targeted at training 40 teachers. Data collection was done in two phases. The first phase was before the training of the teachers in the area of adolescent reproductive health, while the second phase was after the training. The training was done for a period of two months. The curriculum for training included: i. Description and functions of human reproductive organs, ii. Concept of adolescent and puberty iii. Teenage pregnancy: associated problems and prevention iv. Abortion, its associated problems and prevention v. STIs/HIV/AIDS causes and prevention vi. Contraceptives for the adolescents

## Results

Study was done on 40 teachers of Wardha district, among which 37 of them were unaware of adolescent related health problems including teenage pregnancies and use of contraceptives. When comparing the results of pre-training assessment with that of post-training with respect to their knowledge in certain areas of reproductive health matters(i.e. knowledge of adolescence, RHE/SE and STIs/HIV/AIDS)-it was found that about 89-90% of them acquired it after training. The awareness programme conducted by us changed the attitude of teachers by increasing the importance of RHE/SE and of counseling adolescent boys/girls about RHE/SE in school and inclusion of RHE/SE in regular health awareness programme. The skills of teachers also improved after the training programmes.

## Conclusions

Rural teachers need to undergo a thorough training in all areas of RHE/SE including promotion of condom use among adolescents. This will equip them in handling the subject-matter effectively in their respective schools. RHE/SE should be included and made compulsory in the training programme for all teachers of rural schools.

## Key Words

REPRODUCTIVE HEALTH EDUCATION; SEX EDUCATION;STIs/ HIV

## Peak expiratory flow rate (PEFR) in the residents surrounding puffed rice industries

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## Introduction

Industrial pollution has been and continues to be a major factor causing the degradation of the environment around us, affecting the water we use, air we breathe, and the soil we live on. Air quality in many developing countries has deteriorated because of rising industrial activity. Puffed rice is a popular food item, which is produced in the cluster of small units often located in the urban centres. Fuels used in ovens for puffed rice making are mainly rice husk, wood shavings, used automobile tyre, groundnut shell, and agricultural residues. Burning these generates high levels of particulate matter, carbon monoxide and other pollutants. Peak expiratory flow rate is a sensitive indicator for predicting the magnitude of airway obstruction. Hence the present study is done to study the effect of these pollutants on the respiratory system of the residents surrounding puffed rice industries..

## Materials and Methods

A total of 60 healthy adult subjects (30 residing within a range of 100 m of the cluster units and 30 residing more than 100m) were selected randomly among the general population surrounding the puffed rice industries. PEFR was recorded using WRIGHTS Peak Flow Meter. The duration of the stay in the area and the distance of the stay from the puffed rice industries was also considered to see the dose response relationship.

## Results

We found 15.2% decline in PEFR in residents residing

within the range of 100 m of puffed rice industry compared to those residing more than 100m away.

## Conclusions
Smoke of the Puffed rice industries causes inflammation and narrowing of the airways which results in the increase in the resistance to airflow and a decrease in the elastic recoil pressure of the lungs. Health education on hazards of pollutants and also about the safety measures to be taken by the residents should be done.

## Key Words
PEFR, Puffed rice

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## Electrocardiography as a diagnostic tool for identification of low risk patients with chest pain

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## Introduction
Coronary Artery Disease (CAD) is a major cause of mortality and morbidity in India. Chest pain is one of the most feared symptoms in primary care. Thorough clinical examination and diagnostic tools can help accurate diagnosis and risk stratification, it is important to distinguish patients with AMI from those who do not have one. This approach can reduce the hospital costs. We did this study to assess initial electrocardiogram as a diagnostic tool to differentiate high-patients from low risk ones for acute myocardial infarction..

## Materials and Methods
We enrolled patient's aged 30 years and above, presenting with chest pain in emergency department. On admission an electrocardiogram was recorded and detailed history was obtained. The blood samples were sent for routine tests and cardiac biomarker tests. Initial interpretable electrocardiogram recorded in emergency department was evaluated and categorized in four categories and correlated with the final outcome to define whether the patients had myocardial infarction or not.

## Results
Of the 619 patients presenting with chest pain, 426 were included in the study. Of these, 132 patients presented with normal ECG, of which one (0.80%) was subsequently diagnosed with myocardial infarction by CPK alone. Eighteen patients presented with abnormal ECG but no clear evidence of ischemia. 3 (16.70%) were diagnosed with MI. 30 patients presented with abnormal ECG

questionable for ischemia, 5 (16.70%) were diagnosed with MI. 246 patients presented with abnormal ECGs showing ischemia segment, 157(63.80%)were shown to have evidence of MI

## Conclusions
We found that the admissions from category 1, were at low risk for AMI, and could be treated on outpatient basis. Borderline categories that had an intermediate risk of AMI (Category II and III) should be admitted in an intermediate care unit and should undergo cardiac biomarkers and serial ECGs. Category 4 patients who are at high risk of developing AMI and its complications should be admitted to hospital for further evaluation and management.

## Key Words
electrocardiogram,chest pain,acute myocardial infarction,hospital admission

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## The Impact of Zinc Supplementation in Treatment of Acute Diarrhoea in Paediatric Age Group

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## Introduction
Every year approximately 1.7million children die as a result of diarrhoea and dehydration, which is preventable through exclusive breastfeeding, improved hygiene, sanitation and access to clean water; yet diarrhoea is one of the leading causes of death among children <5 yrs. New ORS formula with lower glucose and sodium concentration with zinc supplementation is now recommended in two-pronged treatment for acute diarrhoea by joint statement of WHO/UNICEF in May2004.

## Materials and Methods
A Randomized control trial was conducted in Paediatrics Department, KIMS, Hubli, from 1st June 2011 to 31st August 2011. 150 Children admitted with ≥3 loose watery stools/day; <5yrs age; hospital stay <7days and able to accept oral fluids were included. Those suffering from dysentery, severe systemic diseases were excluded. Children were allotted randomly into 2 groups, one treated with ORS and other with ORS+ Zinc, based on the day they were admitted to IPD. A questionnaire was administered to obtain information about the diarrhoeal episode; anthropometry and grade of dehydration. After receiving treatment, each child was followed for 7days. Analysis was done using SPSS Version15. All hypothesis tested at P<0.05, two-tailed.

## Results

There were 155 study subjects, of which, 55(35.5%) were treated with ORS supplemented with Zinc and 100(64.5%) treated with only ORS. After treatment, the frequency of stools decreased to 3.31 and 3.56 on day4 from 11.09 and 10.91on day1, and finally to 1.49 and 1.59 on day 7 of cases and controls respectively. Both groups showed no significant improvement in consistency of stool on 1stday of treatment but on 3rd day, cases showed 69.1% watery stools and controls 88%. On later days of follow up improvement was not statistically significant.

## Conclusions

The use of Zinc in the treatment of acute diarrhoeal illness improves consistency of stools and increases the time interval between episodes of diarrhoea compared to treatment only with ORS but does not influence the duration. Thus Zinc supplementation along with ORS, improves the compliance of patient.

## Key Words

Acute Diarrhoea,Dehydration, zinc supplementation ,Paediatrics, Randomised control trial,

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## Green Leafy Vegetables-The Cheapest Medicine for Anemia in Pregnancy
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## Introduction

Among Indian pregnant women about 50% of anaemia is due to nutritional deficiency which has led to several complications in pregnancy with maternal mortality and morbidity. As green leafy vegetables is a rich source of iron and are easily available and affordable so the need of the hour is to educate woman to add this in their diet. Keeping this in mind this study has been conducted to assess the impact of health education and motivation to utilize green leafy vegetables..

## Materials and Methods

This study was conducted on patients attending ANC O.P.D of KIMS Hubli-Karnataka for a period of two months. Randomly over a hundred patients in 2nd trimester were selected for this study. After oral consent a pretested and structured questionnaire was given to these patients. 50 of them were advised to take iron and folic acid tablet along with normal daily diet; another 50 of them were given health education to take green leafy vegetables, iron and folic acid tablet along with the normal daily diet. The

dietary history was taken every 10th day. The haemoglobin level was estimated before intervention and after intervention. The estimation was done twice and the rise in haemoglobin level was observed, recorded and compared. Haemoglobin estimation was done by Sahli's / Acid Haematin Method. SPSS statistical software version 17.0 was used. A p value < 0.05 was considered statistically significant (chi-square and t test).

## Results

Mean haemoglobin concentration among cases before and after intervention was 9.85±1.31 and 10.32±1.22 respectively. Among the controls before and after intervention was 10.21±0.97 and 9.85±1.07. After one month of follow-up in both the groups, the mean difference of haemoglobin concentration of cases before and after intervention was 0.47±0.23 respectively. This difference was found to be statistically significant at p=0.05 and among the controls the mean difference of haemoglobin concentration was -0.35±1.18.

## Conclusions

Haemoglobin increases if pregnant women receive a month- long education on consumption of green leafy vegetables.

## Key Words

ANEMIA,PREGNANCY,GREEN LEAFY VEGETABLES

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## Comparative Study of Postnatal Depression among Subjects with Caesarean and Normal Deliveries in Tertiary Care Hospital at KIMS,Hubli
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## Introduction

Postpartum depression is a common mood disorder. Most of the times, it occurs within the first three months of delivery. During postpartum period, 80% women experience postpartum blues,13% experience postnatal depression, and about 0.1-0.2% develop postpartum psychosis. Only half the women with postpartum mood disorders get diagnosed and treated..

## Materials and Methods

We recruited 100 postpartum women from a tertiary care hospital, KIMS. The study design was a cross sectional hospital based study; patients were chosen by purposive sample technique. Patients with prior physical and

psychiatric illness were excluded. Any patients whose infants were stillborn or died before three months postnatal follow up were excluded from the study. The informed consent was taken before women were enrolled in the study. We personally interviewed participants by using standard EPDS questionnaire.

## Results

Of the 100 women, 93 belonged to upper middle class; 41 mothers had educated upto middle school, 38 upto high school, 21 upto intermediate and graduation. 51 cases had undergone caesarean delivery and 49 cases had undergone normal delivery. A third of women had previous bad obstetric history and close to half had complications during this pregnancy. 15 mothers (12 delivered vaginally and 3 delivered by caesarean section) had possible postnatal depression. There was significant association between postnatal depression and type of delivery (P =0.012).There was no significant association between postnatal depression and age of mother (P =0.726), bad obstetric history (P =0.532), gender of present child (P =0.367) and education of mothers (P = 0.331).There was significant association between health of the baby and the postnatal depression (P =0.013).

## Conclusions

Postnatal depression was significantly more among mothers who had delivered vaginally delivery and also whose baby was not well.

## Key Words

EPDS, Postnatal depression, Caesarean section

## Menopausal Syndrome: An Underdiagnosed Condition
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## Introduction

Menopause is a term used to describe the permanent cessation of the primary functions of the human ovaries. Menopause typically (but not always) occurs in women in midlife, and signals the end of the fertile phase of a woman's life. It produces alterations that result in physical and mental disorders, hot flashes, osteoporosis, migraines, mood changes (irritability, depression), These symptoms are often under diagnosed and unrecognized..

## Materials and Methods

We used structured questionnaire to collect data from 100 Gynaecology outpatients in the age group of 45-55 years

who had irregular cycles or had stopped having menstrual cycles past 1 year. The questionnaire consisted of baseline information and questions related to symptoms and signs of menopause. The diagnosis for each patient was recorded from the doctor's diagnosis in the OP slip.

## Results

50 women (20 rural and 30 urban) were included in the study. They presented with symptoms of fatigue(92%),hairloss(72)%,tingling(72%),panic(70%),depression(68%) . 4 % were aware that they can have problems at the time of menopause for which treatment is available. None of these women were diagnosed as having "Menopausal Syndrome". There was no significant association with awareness and their place of residence (rural / urban) and literacy levels.

## Conclusions

Awareness regarding menopausal syndrome and the availability of medical care needs to be created in the community. Doctors need to be more sensitive to this issue so that the right diagnosis and treatment can be provided.

## Key Words

menopause, awareness, under dignosed, physical and mental disorders

## Leprosy-Current Scenario in North Karnataka. How Far Have We Been Successful In Eliminating Leprosy
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## Introduction

Though declared eliminated by WHO, leprosy still remains a commonly diagnosed problem in developing countries. Hence it is essential for clinicians to correctly label report and treat every case of leprosy..

## Materials and Methods

A three and half year retrospective analysis of hospital data from June 2008 to December 2011 was done and all patients with leprosy were included. Clinical spectrum and treatment given was noted and studied.

## Results

322 patients diagnosed as leprosy were chosen for the study. Male: female ratio was 2:1. Ages varied from 4-79 years. Age group 20-30 years constituted 109(33.85%) patients. Duration of disease varied from 15 days to 20

years, most common being 15 days – 6 months-190 cases (59%). Maximum patients presented with skin lesions (77.01%) as their first presenting complaint, followed by Trophic ulceration (21.42%), Ear infiltration (10.86%), Blisters (5.59%). 86.64%were new, Relapse (13.35%), Defaulters (3.41%). Skin lesions were seen more commonly on Upper limbs (37.88%) followed by Lower limbs (28.88%), Trunk (20.18%), Face (15.21%), Gluteal (5.9%). ULNAR NERVE was involved in majority of cases. Most of the patients were diagnosed as BT(63.04%), followed by Pure neuritic(11.18%), LL(9.62%), BL(8.69%), Intermediate(3.1%) = TT(3.1%), Histiod(1.24%). Claw hand deformity was present in total 35 \ patients(10.86%). Type 1 Reaction 56 cases(17.39%) and Type 2 Reaction 18 cases(5.59%). MB dose MDT was the treatment given in majority(87.57%).

## Conclusions
New case detection is not uncommon in the community. Stringent measures like early case detection, counseling the patient and their follow up will go a long way in achieving the goal of elimination. Efficacy of MDT needs further evaluation considering the number of relapses being documented with both MB and PB cases.

## Key Words
Leprosy

## Risk Factors of Cardiovascular Morbidity among Doctors In Coastal Karnataka
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## Introduction
Advancements in the field of science and technology have led to radical changes in the working patterns of Doctors which has greatly affected their lifestyle. Decreased physical activity and sedentary life style, may lead to obesity and also increase the risk of Diabetes Mellitus, and various cardiovascular diseases. Doctor's lifestyle is of utmost importance because a healthy Medical Practitioner acts as a Role Model for his/her patients encouraging them to adopt healthy habits..

## Materials and Methods
A cross sectional study was done among 239 Doctors working in various Medical Colleges and Hospitals of Mangalore in Coastal Karnataka. Data was collected using a Pre-tested semi-structured proforma designed on the guidelines of WHO STEPwise approach to Surveillance

(STEPS). The collected data was analysed using SPSS (Statistical Package for the Social Sciences) version 11.5. Chi-Square test was the statistical test used for analysis.

## Results
Out of 239 Doctors 53.6% were males and 46.4% were females .The mean age was 41.14±9.73years.The prevalence of hypertension was 8.2% (10.2% Males and 6.3% females). The prevalence of diabetes was 9.2% (11.7% (males and 6.3%females). The prevalence of obesity was 31.0% (29.7% males, 32.4 females). Among obese, 82.4% involved themselves in physical activity.

## Conclusions
The prevalence of Obesity, Hypertension, and Diabetes in our study was 31.0%, 8.4%, 9.2% respectively; compared to that in general population, 20% to 40 %( obesity), 5.9% to 6.9%(hypertension) and 4.0% to 11.6%(diabetes) the prevalence of these disorders was high. Doctors need to practice what they preach.

## Key Words
Risk factors, cardiovascular morbidity, Doctors, Coastal Karnataka

## The Potential Role and Prognostic Significance of BCLl-2 and Ki67 Tumour Markers in Gastric Adenocarcinoma
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## Introduction
Gastric adenocarcinoma is one of the most frequent malignancies worldwide. One of the hallmarks of human cancers is the intrinsic or acquired resistance to apoptosis. The bcl-2 protein has been shown to prevent apoptosis or programmed cell death and may play an important role for the regulation of tumour growth. Ki-67 is a cancer antigen that is found in growing, dividing cells, but is absent in the resting phase of cell growth. This characteristic makes Ki-67 a good tumor marker. The fraction of Ki-67-positive tumor cells (the Ki-67 labeling index) is often correlated with the clinical course of cancer. This study is designed to immunohistochemically examine Ki-67 and Bcl2 in gastric carcinomas..

## Materials and Methods
Representative paraffin blocks from 21 patients with diagnosis of gastric adenocarcinoma patients who underwent gastrectomy were retrieved from Kasturba

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Medical college pathology department archive, Manipal. They were subjected to immunohistochemical analysis of Ki-67 and Bcl2 expression to assess the degree of proliferation and apoptosis-related protein respectively. The results were correlated with various clinical and histopathological features which were obtained from the patient's medical records.

## Results

We studied 21 cases (13 men, 8 women) aged between 26 and 78 years. Twelve patients underwent total gastrectomy, while others were treated with subtotal gastrectomy. Most tumours were located in antrum (61%), followed by body (14%), GJ stump (9.5), cardia (9.5%) and gastro-esophageal junction (6%). 10 cases were grouped into diffuse (47%), and others belonged to intestinal type (52%) All cases, except one were negative for Bcl2 expression.Ki-67 expression was grouped into those expressing high score when the positive staining was expressed in more than 45 % of the cells, and low score when equal to or less than 45%. 66% of tumors exhibited a high Ki 67 score. High Ki-67 expression did not correlate with the age, sex, histological type or grade . However, there was a positive correlation between high Ki-67 score and deep serosal infiltration and the lymph node metastases.

## Conclusions

BCL 2 over-expression may be an unlikely event in gastric carcinoma pathways and development, as only 1 case exhibited diffuse cytoplasmic over-expression. High expression of Ki-67 was seen in majority of gastric adenocarcinoma, and correlated positively with other known prognostic indicators like depth of tumor invasion and nodal metastases.

## Key Words

Bcl2, Ki-67, Gastric Carcinoma

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## The Correlation between PSA levels, Gleason Score and Bone Metastases in Prostate Cancer Patients

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## Introduction

In India, prostate cancer is one of the five leading sites of cancers that affect predominantly older males. This study was undertaken to evaluate the predictive value of PSA and abnormal rectal examination in making a diagnosis of prostatic cancer, and to find possible correlation between serum PSA, Gleason score and results of bone scans in patients with diagnosis of prostatic adenocarcinoma..

## Materials and Methods

This is a retrospective study that comprised of all cases of prostatic carcinoma diagnosed in the year 2010 in Kasturba Hospital, Manipal, India. The medical files of these patients were reviewed to obtain information about clinical symptoms, digital examination findings, serum PSA value, the Gleason score from the biopsy report and the results of bone scan. Serum PSA was measured using Tandem -R PSA, monoclonal immunoradiometric assay kit, with a normal range of 0-4ng/ml. The biopsy samples were graded according to the Gleason's score. Technetium 99m bone scan was done in all patients for the evaluation of bone metastases using standard procedures and the results recorded.

## Results

There were a total of 42 patients of prostatic carcinoma, of which only 29 cases were included in this study, as there was incomplete data in other patients. The most common presentation of patients was lower urinary tract symptoms (86%), followed by bone symptoms (38%), and others were asymptomatic (17%). There was no significant correlation between serum PSA levels and low/high Gleason score. There was a positive correlation between high serum PSA values and evidence of positive bone scan results (p=0.022) but there was no significant correlation between Gleason score and bone metastases.

## Conclusions

Serum PSA has a sensitivity of 96% and a positive predictive value of 100% in the diagnosis of prostatic adenocarcinoma and is a better tool than abnormal per-rectal examination in diagnosing prostatic cancer. There was no significant correlation between serum PSA and Gleason score. The Gleason score on histopathology also had no positive correlation with metastases in our study, but a PSA of >50ng/ml was significantly correlated with positive bone scan results.

## Key Words

Prostate Carcinoma, Gleason score, PSA Levels, Bone Metastases

## Seroprevalence of Toxoplasma, Rubella Virus, Cytomegalovirus and Herpes Simplex Virus Ii Infections in Pregnant Women and Fetal Outcome – A Retrospective Study
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## Introduction
Maternal infections play a critical role in pregnancy wastage. Infections caused by TORCH are the major cause of bad obstetric history. Maternal infections are considered significant factor in the causation of poor pregnancy outcome elsewhere but has not assumed much significance in India due to inadequate documentation. This study was therefore undertaken to retrospectively determine the seroprevalence of TORCH infections in pregnancy and the outcome of pregnancy in patients who were reported seropositive for TORCH infections..

## Materials and Methods
We conducted this study at the Diagnostic Microbiology Laboratory, K.M.C. Hospital, Mangalore. The serological reports of 100 pregnant women (retrospectively from June 2009 to May 2011) whose serum samples were sent to the laboratory to determine seroprevalance of acute TORCH infections were included in the study. The patient's history was abstracted from the medical records department and data were entered in the data collection forms. The details of risk factors for TORCH infections were obtained from the patient's medical records. The data were analyzed to determine correlation between TORCH seropositivity and fetal outcome.

## Results
TORCH pathogens cause infections in pregnant mothers and can adversely impact maternal and fetal outcome. Previous history of pregnancy wastages and positive serological reactions during current pregnancy can greatly help in early diagnosis and appropriate intervention of these infections so as to reduce adverse fetal outcome.

## Conclusions
TORCH pathogens cause infections in pregnant mothers and can adversely impact maternal and fetal outcome. Previous history of pregnancy wastages and positive serological reactions during current pregnancy can greatly help in early diagnosis and appropriate intervention of these infections so as to reduce adverse fetal outcome.

## Key Words
TORCH, Infections, Pregnancy, Congenital, Manifestations

## Problem Drinking Among the In-Patients of Hospitals Attached to Kasturba Medical College, Mangalore, South India
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## Introduction
Alcohol problems vary in severity from mild to life threatening and affect the individual, the person's family, and society in numerous adverse ways. Therefore, the present study was conducted to find the proportion of problem drinking among the in-patients of hospitals and to study the factors and impacts associated with it..

## Materials and Methods
The study was conducted on the in-patients of 3 medical colleges in Mangalore city. Inclusion criteria were men above 16 years of age admitted to wards of Medicine, General Surgery and Orthopedics and who gave consent for participation. The sample size was 250. Data was collected using AUDIT and a Self Designed Semi-Structured Questionnaire. Data was collected by personal interview by the investigator analysis was done using SPSS Vn 11.5.

## Results
Of the total 2214 patients that were present in the Medicine, Surgery and Orthopedics wards of the three hospitals during the study period, one-third of the patients consented for the study and among them, proportion of alcohol users was 11% (250). Main factors associated with drinking were stress at work, drinking alone and strained relationships among the family. The major consequences of drinking like brawls and hangovers were seen much more in problem drinkers as compared to the normal drinkers. 35% of the problem drinkers did not have knowledge about the ill effects of drinking and 59% did not want to give up drinking

## Conclusions
Problem drinking is quite significant among the in-patients of the hospitals. The major problem is that a large number of problem drinkers are not aware of the ill effects of drinking and a majority of them do not want to give up drinking.

## Key Words
problem drinking, in-patients, ill effects ,consequences

## Metallobetalactamase Producing Pseudomonas Aeruginosa In Clinical Samples

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## Introduction

Pseudomonas aeruginosa is a pathogen in variety of infections, and an emerging nosocomial pathogen. MBL enzymes are a cause of concern because they are able to hydrolyze most Beta lactams including Imipenem and Meropenem which are considered for the treatment of Gram negative multidrug-resistant strains as a last resort. The emergence of the MBLs in Pseudomonas species is a therapeutic challenge as these enzymes possess high hydrolytic activity that leads to degradation of higher cephalosporins. The overuse of broad spectrum antibiotics has extended the incidence of MBL production in the community..

## Materials and Methods

50 isolates were obtained from samples of the patients. Identified as P. aeruginosa by conventional methods routine antibiotic disc sensitivity testing was done on Mueller Hinton agar using disc diffusion method (NCCLS). The antibiotics tested were Gentamicin, Amikacin, Ceftazidime, Cefotaxime, Ciprofloxacin, Cefuroxime, Norfloxacin, and Cefazolin. All the strains showing resistance to multiple drugs was tested for Imipenem susceptibility. Imipenem resistant isolates were screened for MBL production by 1) Combined Disc Test with EDTA and 2) EDTA double disc synergy test

## Results

96% resistance to Ceftazidime among the P. aeruginosa observed. Meanwhile 26 ( 52%) of screened bacteria were MBL positive by EDTA double disc synergy test and 32 ( 64%) were MBL positive by EDTA combined disc test. In combined test it was easier to detect extension of zone more than 6 mm. Maximum number of MBL positive isolates were obtained from urine, followed by wound swab and sputum. Out of 32 male patients 24 (75%) were positive for MBL production but out of 18 females only 8 (44.44 %) patients were positive

## Conclusions

With increasing isolation of ESBL producing isolates necessitating the use of Carbapenems like Imipenem and Meropenem, the problem of MBL production is also increasing. The development of simple screening tests -the combined disc test method- to detect MBL production will be crucial step towards large scale monitoring of these emerging resistant determinants.

## Key Words

Metallobetalactamases, Psuedomonas aeruginosa, Combined disk test, resistant strains

## Effect of Temozolomide on Treatment Outcome for Patients of Glioblastoma Multiforme and Anaplastic Astrocytoma Treated with Radiotherapy

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## Introduction

Glioblastoma Multiforme [GBM] is highly invasive and spreads rapidly to the surrounding tissue. Anaplastic astrocytoma is also highly invasive and affects both men and women in the age group of 30 to 50. Treatment can involve chemotherapy, radiation, radio-surgery, corticosteroids and antiangiogenic therapy. The standard treatment is surgery if operable, followed by radiotherapy or radiotherapy with chemotherapy but the survival benefit using these is very poor. The new chemotherapeutic agent Temozolomide has emerged as an active agent against malignant glioma during the past decade..

## Materials and Methods

A retrospective study was conducted amongst 56 patients with anaplastic astrocytoma or GBM who were treated with radiotherapy alone or radiotherapy with chemotherapy in KMC hospitals, Mangalore. Data from Medical Records Department was collected using a pretested semi-structured Proforma. The protocol was approved by the IEC, KMC Mangalore

## Results

Most of the patients suffering from the two tumors were females. Majority of the patients had received only radiotherapy (56.6%) in a dose of 5940cgy/32#/6.5wks. Most common presenting complaints were seizures and headache followed by altered sensorium. The tumors affected mostly the frontal lobe (36.36%) followed by parietal lobe (20%). Most of the patients had undergone complete surgery (55.4%) for it. The median survival rate was found to be 11.9 months (only radiotherapy) and 14.2months (radiotherapy with chemotherapy).

## Conclusions

Most affected patients were women and anaplastic

astrocytoma was more common in the patients below the age of 20 years while GBM was more in the patients above 60 years. The median survival rate was found to be 11.9 months (only radiotherapy) and 14.2months (radiotherapy with chemotherapy).

## Key Words
temozolomide, median survival rate, glioblastoma multiforme, anaplastic astrocytoma

## Efficacy of Dipstick Urinalysis and Platelet Parameters in Screening for Preeclampsia
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## Introduction
Hypertension is one of the common complications in pregnancy and contributes significantly to maternal and perinatal morbidity and mortality. Factors predisposing to pre-eclampsia include null parity, diabetes mellitus, multiple gestations, extremes of age and genetic inheritance. In the present study, dipstick urinalysis for proteinuria, glycosuria, and platelet parameters were evaluated to determine the effectiveness of the tests as simple and cost-effective methods in screening for preeclampsia. The study parameters could serve as indicators for women at risk for the occurrence of eclampsia thus improving maternal and neonatal outcome..

## Materials and Methods
A prospective study was conducted on 150 females in all the three trimesters attending the antenatal clinic in Lady Goschen Hospital, Mangalore, South Karnataka. Routine urine dipstick screening for protein and glucose was done and platelet parameters were also recorded.

## Results
The study was conducted on 150 antenatal women to evaluate the efficacy of dipstick urinalysis for proteinuria and glycosuria in preeclampsia. Platelet counts were also evaluated along with blood pressure. The maximum systolic and diastolic blood pressure was observed in Preeclampsia (150.62 and 99.65 in 58 patients) followed by Pregnancy Induced Hypertension (150.18 and 90.33 in 54 patients).All degrees of proteinuria from 1+ to 4+ were predominant in the 3rd trimester in 96.5% of Preeclampsia patients followed by 18.5% of Pregnancy Induced Hypertension. Glycosuria was found only in the 3rd trimester in GDM. Thrombocytopenia was seen only in 3

cases of Preeclampsia and it was low normal in the remaining cases of Preeclampsia (mean=1.681) and it was within normal limits in Pregnancy Induced Hypertension and GDM (mean= 2.15 and 2.07). Out of 150 women, 35 had blood pressure within normal limits. Proteinuria was seen in 67 women. Based on the parameters evaluated, the gestational disorders could be categorized into PE (58), PIH (54), GDM (3) and 35 were normal.

## Conclusions
Dipstick urinalysis or a single voided random sample is an effective and simple method of detecting mild proteinuria in screening for preeclampsia. The early detection of preeclampsia will provide better treatment modalities for both mother and child.

## Key Words
Preeclampsia, Proteinuria, Dipstick analysis,platelet parameters.

## Development of Metabolic Risk Factors after Initiation of Second Line Anti-Retroviral Therapy
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## Introduction
Highly Active Anti-Retroviral Therapy (HAART) is accompanied with several metabolic effects like adipose redistribution and insulin resistance. HAART has reduced the number of deaths but is associated with increased risk of strokes and heart attacks. We did this study to examine the association of HAART and lipodystrophy..

## Materials and Methods
The study design was cross sectional. Subjects were HIV infected patients from hospitals of Kasturba Medical College Mangalore. 26 patients were on protease inhibitors for at least 6 months and 14 were drug naive patients. Assessment of lipodystrophy, fasting blood sugar and fasting lipid profile was done (blood was collected after minimum of 8 hours of fasting) and these parameters were compared in two groups. The collected data was analysed using SPS version 11.5. We did chi² test for binary data and for student "t" test for continuous data. P value less than 0.05 was considered significant.

## Results
There was elevation in total cholesterol level (172.65±47.609mg/dl) in individuals on protease inhibitor versus drug naive patients (141.36±7.70mg/dl),(p=0.020)

.There was significant elevation in Low Density Lipoprotein (0.029) and decrease in High Density Lipoprotein level (p=0.012) in individuals on protease inhibitors. The levels of High Density Lipoproteins decreases with increase in duration of protease inhibitors i.e. individuals who were on protease inhibitors for less than two years had mean High Density Lipoprotein (29.05±15.71 mg/dl) versus those who are on treatment for more than 5 years (14.02±22.16), (p=0.025) and Low Density Lipoprotein levels increase with duration of Anti-Retroviral Therapy those who were on treatment less than 2 years mean LDL(102.18±39.32) versus those on treatment for more than 5 years (127.38±22.66);(p=0.10).

## Conclusions

Human immunodeficiency virus infection is related to metabolic complications which are aggravated by using second line anti-retroviral therapy. All HIV infected patients receiving protease inhibitors must have their glucose and lipids measured periodically.

## Key Words

HAART:Highly Active Anti Retro Viral Therapy,PI:Protease Inhibitor,LDL:Low Density Lipoprotein,HDL:High Density Lipoprotien,FBS:Fasting Blood Sugar, ART:Anti Retroviral Therapy

## Audiovisual Aids Preferred by Undergraduate Medical Students for Lectures in Community Medicine at Kasturba Medical College in Mangalore, South India.

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## Introduction

Medical Education all over the world is taught through various teaching styles, mostly through lectures. In a subject such as community medicine, which many students find boring, it is important to find a method of teaching that can balance the process of learning and at the same time keep the student interested in the subject. Therefore this study was planned to find the preference of students regarding use of aids during lectures in Community Medicine, find factors that are associated with such preferences and take feedback to improve their learning..

## Materials and Methods

The study was conducted among 4th and 6th semester medical students in Kasturba Medical College Mangalore, South India. A total of 309 students were included in the study. Data was collected using a pretested semi-structured questionnaire and the subjects were selected by convenient sampling. Data analysis was done using SPSS version 11.5.

## Results

Most students (33.7%) preferred chalk and board method for lectures, followed by demonstration method (30.4%) and power point presentations (21.7%). For taking down notes in the class 69% of the students preferred chalk and board method followed by 40.9% who preferred power point presentations. No significant association was found between preference of teaching methods with gender (p=0.3) and semester (p=0.4). Only 52.3% of students feel that their doubts are being clarified during lecture. Many students felt that classes should be shorter than 1 hour, with more interaction between students and teachers and the projector as a visual aid could be improved by incorporating more video and audio material.

## Conclusions

Most of the students in the study preferred chalk and board technique as the teaching method for lectures in Community Medicine and they expressed that optimal use of modern methods like power point can be enhanced by more graphic presentation of the subject.

## Key Words

Audiovisual aids,lectures,south india

## Clinical profiling of Pediatric patients visiting the Anti-retroviral therapy center

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## Introduction

Acquired immune deficiency syndrome (AIDS) is a disease of the human immune system caused by the human immunodeficiency virus (HIV). Children represent only 6% of all people infected with HIV/AIDS. One in every 6 AIDS deaths each year is a child, yet children represent less than one of every 25 persons getting ART treatment in developing countries today. Antiretroviral therapy reduces the incidence of opportunistic infections and provides life-sustaining support for the HIV infected child. We did this study to examine opportunistic infections occurring in patients infected with HIV and to assess the effect of ART

therapy.

## Materials and Methods
The study design was cross sectional. We conducted this study in the ART center of Government Wenlock Hospital, Mangalore over a two-month period. We collected data on 60 patients who visited the ART centre during the study period. Data analysis was done by SPSS (statistical package for social studies) version 11.5.

## Results
Most patients belong to the 5.1-10 age group (41.7%); 60% were boys. In 98.3% of pediatric patients the risk factor was mother to child which includes vertical transfer that is through placenta or through breast feeding. A third of patients were suffering from TB, which is the most prevalent infection. Children tended to gain weight and their CD4 counts increased after they were put on ART

## Conclusions
ART is effective in improving general well-being and clinical status of seropositives children

## Key Words
Anti retroviral therapy, Pediatrics

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## Trends in Genitourinary Tuberculosis in a Tertiary Care Hospital
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## Introduction
A third of world's population is infected with Mycobacterium Tuberculosis. The clinical presentation of TB is highly variable, with extrapulmonary TB becoming more prevalent. Genitourinary TB (GUTB) in females is a major health problem in developing countries including India. Often neglected by healthcare providers, it leads to infertility and increases risk of ectopic pregnancy..

## Materials and Methods
Medical records of patients with diagnosed genitourinary tuberculosis over 5 years were accessed. SPSS software was used for analysis.

## Results
65% of the patients presented with symptoms such as abdominal pain, distension, postprandial fullness, vomiting and constipation.45% had urinary symptoms like dysuria. Reproductive tract symptoms like menstrual disturbances were seen in 5% of patients. Most patients (about 80%) had generalized symptoms like malaise, loss of weight etc.

75% patients were seropositive for HIV. First line anti-tubercular drugs, i.e., isoniazid, rifampicin, pyrazinamide and ethambutol, were given to all patients. Also 60% of the patients were prescribed antibiotics like quinolones, metronidazole for co-existing infections. 20% cases underwent nephrectomies due to non-functioning kidneys.

## Conclusions
GUTB has a variable presentation; abdominal – and not genitourinary- symptoms are the presenting symptoms of the disease. Anti-tubercular drugs are the mainstay of treatment. Surgeries are useful if done in accordance with EAU guidelines. Women with GUTB need to be periodically followed to reduce the incidence of infertility

## Key Words
Genitourinary tuberculosis, Prescribing trends

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## A study on the cutaneous manifestations of diabetes
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## Introduction
Diabetes is clinically and genetically a heterogenous group of disorders characterized by abnormally high levels of glucose in the blood(1) HbA1C is a measure of the average level of blood glucose during the last three months. It will be useful to know if there's any correlation between the spectrum of Cutaneous changes in DM and the level of HbA1C..

## Materials and Methods
The study was a cross sectional, descriptive, analytical study of 100 patients coming to the OPD of the Dermatology / Medicine Department or Ward done for two months. SOURCE OF DATA: Patients between the aged 30-65yrs with type 1or type 2 Diabetes Mellitus coming to the Dermatology or Medicine OPD/ Wards was taken. Sample size and method- 100 consecutive series of patients diagnosed with Diabetes Mellitus. Method of collection of data- Those patients having Diabetes Mellitus according to the ADA criteria was subjected to the following- 1) Relevant Data with respect to the Name, age, chief complaints( cutaneous), type and duration of diabetes mellitus and a 2.) Complete Cutaneous Examination. STUDY DURATION- Two Months. INCLUSION CRITERIA: Patients aged between 30-65yrs of age are taken who have been diagnosed with DM. EXCLUSION CRITERIA • very young patients(less than 30yrs) or Very old patients( more than 65yrs) are not taken

## Results

In the study conducted, It was seen that 44% were female and 56% were male. • 42 subjects (42%) had Skin Manifestations Associated with DM, 21 subjects (21%) had Cutaneous Infections, 29 subjects (29%) had Vascular Manifestations of DM, 2 subjects(2%) had Diabetic Neuropathy and 6 subjects(6%) had Other skin Manifestations.(fig.5) • The number of Cases having a HbA1C more than 6.5% were 58 out of the 100 subjects. • Out of which 34.48% had Skin Manifestations Associated with DM ,29.31% had Cutaneous Infections, 29.31% had Vascular Manifestations of DM , 3.44% had Diabetic Neuropathy , and 3.44% of the cases had Other manifestations nonspecific to DM

## Conclusions

This study showed that the Cutaneous lesions can serve as Cutaneous markers for DM . It also shows that elevated levels of HbA1C do not have much effect on the skin manifestations .

## Key Words

Cutaneous manifestations, Diabetes Mellitus

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### Television Viewing Habits of Indian Children Aged 3 to 11 Years: A Government Hospital Paediatric Out Patient Department Based Survey

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## Introduction

There is growing concern about negative influences of television viewing on children's health. Western studies have shown adverse impact on physical activity, sleep, eating behaviour and scholastic performance. There is paucity of data on television viewing habits of Indian children. This was studied in children aged 3 to 11 years attending a tertiary level Government Hospital..

## Materials and Methods

A cross-sectional descriptive survey was conducted in an Out Patient Department. Children between 3 to 11 years were recruited by opportunity based selection. Children without televisions at home or with co-morbid mental retardation or epilepsy were excluded. A 28 itemed questionnaire was administered to each care-giver –child pair. This included details of demography, television-watching habits and parental perspectives on child's health. Responses were documented by the interviewer.

Nutritional status was assessed. Descriptive statistics were used.

## Results

Study population comprised of 109 children (54% boys, 46% girls), 48 between 3-5years and 61 between 5-11 years. Most children went to pre-school or school. Majority belonged to middle and lower socio-economic classes (62% and 36% respectively). Maternal literacy was less than senior secondary in 69.72%. Television viewing was the preferred mode of entertainment. For indoor play although toys were preferred, screen games were played by 23.8%. In non- school going children average daily television viewing was 2.9 hours. In school going children average television viewing was 2.4 hours on school days and 3.2 hours on non-school days. Majority (71.3 %) lacked parental restriction regarding program content and 31.5% watched without adult supervision. The most common type of program watched was cartoon (animated feature). Only 39.8% watched programs with educational content. Inappropriate behaviours commonly observed included poor eating habits, improper posture, poor homework habits and television before bedtime.

## Conclusions

Television is widely available and popular amongst children irrespective of economic status. Inappropriate television viewing can adversely affect physical and mental health of pre-school and school aged Indian children.

## Key Words

Television influences, television habits, Indian children

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### A study of emotion regulation process in patients admitted with suicidal attempts at a Tertiary care hospital in Bangalore

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## Introduction

Suicide is a complex spectrum of events extending from suicidal ideation, plan, and behavior to completed suicide. Completed suicide in India in year 2010 was 11.4 per lakh population. Suicidal behavior/ Deliberate Self Harm (DSH) is one of the premonitory sign of completed suicide. It is one of the top 5 reasons for acute hospitalization throughout the world. There are various reasons for suicide attempts; one among them is major psychiatric illness. It is also manifestation of emotional distress. The level of emotional reaction to any event depends on

appraisal of that event or suppression of emotions. Most often the causes of suicide are preventable. Hence it is important to know the emotional dysregulation which leads to suicidal attempts. There is a dearth of studies related to emotion regulation process in patients who have attempted suicide. We did this study to provide information on emotion regulation process amongst suicidal attempts..

## Materials and Methods

Patients admitted with history of DSH behavior at M S Ramaiah Medical College and Hospital was included in the study. Acute management was done by Accident and Emergency (A and E) team. Patient were further observed and evaluated at Intensive Care Unit (ICU). Psychiatric evaluation was done once patient was clinically stable. After Informed written consent from the patient, demographic details were collected using semi structured questionnaire. Life event scale, recent life change questionnaire, and Emotion regulation questionnaire were administered. Confidentiality was maintained. Information was also collected from reliable informant with the permission of the patient.

## Results

During study period 15 inpatients -7 men and 8 women- were interviewed Three were aged less than 20; the rest were aged more than 20. RLCQ and LES were also applied. The scores were insignificant implying that even in the absence of multiple stressful events in the life, suicidal attempts were made. ERQ responses are categorized into 3 groups viz. disagree, neutral and agree for every question. We found that 9 patients agreed that they were using reappraisal type of emotional regulation processes more than the suppression whereas the rest used suppression type of regulation processes more.

## Conclusions

Suicidal attempts are equal among men and women. Younger generations are attempting suicide for insignificant stress. Both reappraisal and suppression type of emotional regulation processes are used almost to the same extent by the individuals.

## Key Words

Deliberate Self harm, Emotional Regulation Process,Recent Life Events

# Electrophysiologic Study in Cervical Radiculopathy

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## Introduction

Cervical radiculopathy (CR) is an important cause of patients visiting to hospital because of root pains, numbness or loss of power. History, physical examination and radiological evaluation lack enough accuracy to distinguish cervical radiculopathy from other competing disorders. Electro- diagnostic tests can fine tune the diagnosis of peripheral neuropathies and can also assess physiologic integrity of nerve roots. We did this study (1) determine the usefulness of the F-wave in the diagnosis of cervical radiculopathies; (2) to assess diagnostic accuracy of motor and sensory nerve conduction study parameters for detection of cervical nerve root compression, and 3) to find out utility of needle electromyography for CR..

## Materials and Methods

We enrolled 100 subjects, above 40 years of age, clinically diagnosed to have CR. We did their electrophysiological studies on RMS EMG EP Mark-II machine. We measured conduction velocity, distal motor latency and compound muscle action potential (CMAP) amplitude by supramaximal stimulation of a motor nerve (median, ulnar, radial, axillary, musculocutaneus and suprascapular). We also stimulated sensory nerves (median, ulnar and radial) to record sensory nerve action potential (SNAP) and conduction velocity. We also evaluated M-latency, F-max.latency, F-mean latency, F-M latency, and F-velocity. Finally, we analysed MUAP and Interference pattern.

## Results

MNC: CAMP amplitude was reduced in most patients. DMN was prolonged and CV was notably reduced in the nerves. SNC showed no significant changes. EMG: Most patients with CR showed spontaneous activity in the affected muscles along with fibrillations. The interference pattern was altered and MUAP had varied results. F-min: was noticeably prolonged

## Conclusions

This study highlights the overall diagnostic usefulness of electrophysiological evaluation in CR patients. The MNC, F-wave latency and EMG changes can help doctors diagnose CR, accurately and efficiently.

## Key Words

Cervical Radiculopathy, Diagnosis, Electrophysiologic, EMG

## Misconceptions about Diabetes Mellitus in Urban Pondicherry: Barrier for effective prevention, control and treatment

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## Introduction

Diabetes mellitus is universal health problem having a global prevalence of 1.3%. More than 220 million people worldwide have Diabetes. India is known as "Diabetes capital of the world" with prevalence of 4.0-11.6% in urban dwellers. The major hurdle for seeking health care advice is misconceptions about the disease, which revolve around all the aspects of diabetes including prevention, control and treatment. The present study was done to know the prevalence of false beliefs among urban population of Pondicherry and its correlation with socio-demographic factors..

## Materials and Methods

A cross sectional study was conducted at Urban Health Center (UHC) of Community Medicine department located at Ariyankuppam, Pondicherry. The study included all adult patients with or without Diabetes, visiting the UHC. A total of 406 patients were interviewed during 2 weeks time period. Questionnaire included information on socio-demographic characteristics, as well as questions related to myths and misconceptions about diabetes mellitus. Data were analyzed by using Epi-info software. Tests used to assess the difference between the two groups were t test and chi square test.

## Results

Most men (65.6%) believed that diabetes occurs only in old age, as compared to women (55.1%). Muslims tended to believe that diabetes is contagious compared to individuals from other religions. (p= 0.001). Almost everybody, regardless of the socio-economic status, believed that diabetes can be cured by herbal treatment and bitter foods reduce elevated blood sugar level. No significant differences in misconceptions were found among various age groups.

## Conclusions

Most men (65.6%) believed that diabetes occurs only in old age, as compared to women (55.1%). Muslims tended to believe that diabetes is contagious compared to individuals from other religions. (p= 0.001). Almost everybody, regardless of the socio-economic status, believed that diabetes can be cured by herbal treatment and bitter foods reduce elevated blood sugar level. No significant differences in misconceptions were found among various age groups.

## Evaluation of the Revised National Tuberculosis Control Program (RNTCP) in Puducherry district, South India, a cross-sectional study

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## Introduction

Tuberculosis is a major public health problem of India. It is infectious and expensive public health disease. In the light of above background, objective of this study designed is, to evaluate the efficacy of RNTCP by assessing: 1.The case detection rate and cure rate among newly detected (new smear positive) tuberculosis patients under Revised National TB Control Program (RNTCP) in the field practice service area of Bahour, Ariyankuppam and Kirumampakam. 2. Socio-demographic variables affecting outcomes of case detection rate and cure rate under RNTCP..

## Materials and Methods

This was a population-based cross-sectional study, carried out during 1st March, 2011 to 30th April, 2011 (2 months) in the rural and urban field practice area of Mahatma Gandhi Medical College and Research Institute, Puducherry. Universal sampling technique was used for the selection of 118 individuals who registered in the DOT centres under primary health centre Ariyankuppam (41 cases), Bahour (38 cases) and Kirumampakam (39 cases) during 1st March 2009 – 28th February 2010. The required data were obtained from the concerned tuberculosis register and DOT providers.

## Results

Out of 118 cases, 81 (68.6%) were pulmonary tuberculosis and 37 (31.4%) were extra pulmonary. Among pulmonary cases 58 (71.6%) were new sputum smear positive, in which, 46 (79.3 %) were treated successfully, 8 (13.8%) were treatment defaulter, 1 case was treatment failure and 3 were died. Overall, case detection rate and cure rate was 90.9% and 79.3% respectively. In univariate analysis, female sex (p = 0.06) and unemployment (0.049) was significantly associated with the successful treatment outcome while higher defaulter rate was observed significantly in males (p = 0.03).

## Conclusions

In this study, case detection and cure rate were higher than revised national tuberculosis control program objective, while sex and occupation were important correlates of DOTS treatment outcome.

## Key Words

DOTS provider, RNTCP, Tuberculosis register

## Knowledge, attitude and practice of mothers in using gripe water for their babies

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## Introduction

Breast milk is the natural choice of nutrition for most infants around the world. But from the earlier studies, the prevalence of exclusive breast feeding was found only to be 48.3% in this part of the country. Gripe water continues to be a major threat to exclusive breast feeding. The reason for its continued use is due to certain misconceptions that are prevalent among mothers. In order to ascertain the reason why mothers use gripe water and to find out what benefits or health risks it poses, we proposed to study the knowledge, attitude and practice of mothers using Gripe water..

## Materials and Methods

335 eligible mothers of infants aged 1 month – 6 months, who attended the "Well Baby Clinic" of our Hospital, were interviewed using a semi-structured questionnaire. The study population was divided into two groups based on the administration of Gripe water; the results were compared and analyzed using statistical package SPSS version 13.

## Results

64.18% of the mothers were administering Gripe water for their infants. Most of the mothers believe that Gripe water helps in digestion and prevents stomachache. Infantile colic, vomiting and constipation were common in infants getting Gripe water than in the other group who did not receive and the difference was significant with p values of 0.0001, 0.0373 and 0.0007 respectively.

## Conclusions

Gripe water administration is common and it is a risk factor to develop Gastro-intestinal problems like infantile colic, vomiting and constipation. Misconceptions among the mothers can be corrected by effective counseling to make them fully aware of the safe and healthy feeding practices to be adopted in feeding their infants.

## Key Words

Gripewater, Exclusive breast feeding, Gastro intestinal problems

## A cross sectional study of the validation of the Madras diabetes Research Foundation (MDRF) – Indian Diabetes Risk Score (IDRS) in rural Puducherry

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## Introduction

Diabetes Mellitus is one of the major non-communicable diseases in India and the recent World Health Organization (WHO) report suggests that there are over 35 million people with Diabetes in India . Unfortunately , over half these people remain undiagnosed as Diabetes is asymptomatic in them. Therefore, there is obvious need for a simple screening tool for detecting undiagnosed diabetes in the community. The Indian Diabetes Risk Score, developed by Mohan Viswanathan and colleagues , was derived using four simple variables namely age, family history, physical activity and waist circumference. Though the IDRS was internally validated using the CURES study and in other urban areas , not much validation data is available from rural areas. This study aims to validate the IDRS through a population based study in rural Pondicherry..

## Materials and Methods

This study was carried out in seliamedu (Puducherry) for two months on adults aged 20 years or more. The surveyed sample was 101 and sampling was done by systematic random sampling . All the subjects were administered with a questionnaire which included details regarding demographic and socioeconomic characteristics. Family history of Diabetes was obtained and physical activity was assessed. BMI and waist circumference were also taken. Oral Glucose Tolerance Test was done in all subjects except in known diabetic subjects. All subjects were also assessed for their lipid profile. Statistical analysis was done using SPSS PC windows and ROC curve was constructed.

## Results

Of the total 101 subjects, 12 (11.8%) were known diabetic subjects and 18 (17.8%) were found to be newly diagnosed diabetic subjects. Out of the 61 subjects who had an IDRS>= 50, 22 subjects (36%) had hypercholesterolemia. The area under curve for receivers operating characteristic curve was 0.800. it was found that an IDRS >=60 had a sensitivity of 83.3% and a specificity of 49.3% for detecting undiagnosed diabetes in the community.

## Conclusions

The MDRF- IDRS is a useful tool for screening undiagnosed diabetes in the population. This study validates its sensitivity, specificity and accuracy in a rural population and confirms the same IDRS score >= 60 as being the best cut-off point for identifying undiagnosed diabetes.

## Key Words

Diabetes Mellitus, IDRS, screening, hypercholesterolemia

## The role of nocturia as a screening test for early diagnosis of chronic kidney disease

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## Introduction

Chronic kidney disease is a worldwide under diagnosed public health problem with increasing incidence. The treatment is costly, and outcomes, poor. Reduced kidney function is an independent risk factor for cardiovascular events and/or all-cause mortality. Nocturia is an early manifestation of kidney disease and can identify patients with chronic kidney disease. We did this study to find out prevalence of kidney disease among asymptomatic individuals..

## Materials and Methods

We screened 502 individuals >18 years of age for hypertension, diabetes mellitus, smoking; family history of kidney disease, nocturia and albuminuria. Patients with positive dipstick are subjected to spot urine protein - creatinine ratio and their serum creatinine, urine analysis were done to confirm the presence of kidney disease.

## Results

The CKD prevalence was 5.4%.Using the Dipstick test 72 people had proteinuria of 1+ or higher. Among these 37(51.4%) had spot urine protein creatinine ratio of more than 0.3. Among the 37 people with positive spot urine

protein creatinine ratio, 24 people had history of nocturia. By multivariate analysis, increasing age, history of nocturia, spot urine protein creatinine ratio significantly co-related with Chronic Kidney Disease. ROC shows nocturia predicted urine proteinuria-creatinine ratio ≥0.25 with sensitivity of 83% and specificity of 70% and nocturia predicted estimated MDRD GFR <60 ml/min/1.73m2 with sensitivity of 79% and specificity of 59%. Nocturia was present in 63% of all patients with kidney disease. Nocturia was the only identifying factor in 0.2% of patients with kidney disease.

## Conclusions

The Chronic Kidney Disease prevalence in the community screened was 5.4%. Nocturia significantly increase the detection rates of Chronic Kidney Disease of over and above the dip-stick detection of proteinuria. Male gender, nocturia, systolic blood pressure, Glomerular filtration rate were independent predictors of urine proteinuria. Hence nocturia significantly increases detection rate of chronic kidney disease at an early stage.

## Key Words

nocturia,Chronic Kidney Disease,GFR,proteinuria

## Association between Waist Circumference and serum triglyceride status in Type 2 Diabetes Mellitus - A study done on a rural population in Pondicherry.

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## Introduction

Epidemiological and lifestyle changes have been implicated in the high burden of diabetes in India. Antropometric measures with biochemical indicators have been used as screening tools for metabolic abnormalities in adolescents and adults. . Waist circumference (WC) is a crude pragmatic and effective measure of central obesity. Moreover, in the presence of an increased waist measurement, fasting hypertriglyceridaemia may represent a simple but useful marker of the possibility that the increased girth is due to visceral fat accumulation.

## Materials and Methods

This is a cross – sectional study comprising of 42 male and 38 female subjects >18 years with known history of diabetes mellitus visiting the out-patient department.

Biochemical parameters assessed include serum triacylglycerol (TAG) and HbA1C and anthropometric measures include waist circumference and waist-hip ratio (WHR) as measured using standard protocol.

## Results

We found that there was a significant association between WC and TAG levels (p = 0.030). In contrast there was no significant association between WHR and TAG levels (p = 0.57). A significant association was also found between high TAG levels and high HbA1c values (p = 0.03) with no association between anthropometric measurements (WC and WHR) and HbA1C levels (p = 0.29 and 0.16 respectively).

## Conclusions

Simple anthropometric measures like WC (measure of visceral fat) had associations with health risk indicators like TAG that appeared to be a predictor of metabolic and cardiovascular (CVD) complications. Furthermore there was no association between WHR and TAG proving that WC is a better indicator than WHR in predicting the outcome of Diabetes mellitus. There is no such relationship among WC and HbA1C .This justifies that increased WC has no significant role over the long term control of Diabetes (as evident by HbA1c values). Moreover this study reveals that there is an association between high TAG and HbA1C levels which may be attributed to uncontrolled diabetes. A simple measuring tape which is used in measuring WC could prove to be the most useful and cost-effective tool for monitoring the metabolic complications of type 2 DM.

## Key Words

Diabetes Mellitus, Waist circumference, waist-hip ratio (WHR), serum triacylglycerol

**Utility of plasma functional and non-functional proteins as simple, sensitive and economical biochemical indicators of liver diseases.**

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## Introduction

The present study was essentially focused on testing the efficacy of functional proteins (albumin, total protein and A/G ratio) and plasma nonfunctional proteins namely aspartate aminotransferase (AST), alanine aminotransferase (ALT) and De Ritis ratio (AST/ALT) in the differential diagnosis of liver diseases, with particular reference to alcoholic liver disease. Furthermore, we wanted to arrive at a simple, sensitive, accurate biochemical indicator of ALD in comparison to other liver diseases such as viral hepatitis (VH) and non-viral hepatitis (NVH), keeping in view the fact that Puducherry and adjoining areas register a high percentage of alcoholics, particularly from the poorer sections of the society who cannot afford to undergo the full battery of LFTs. We also wanted to review the ambiguity in the utility of De Ritis ratio, as reported by earlier groups of workers..

## Materials and Methods

This is a descriptive study comprising of 90 subjects including all patients with liver diseases, grouped under ALD, VH and NVH irrespective of age and sex.The various biochemical parameters namely AST, ALT, albumin, total protein, bilirubin levels were measured and analyzed for statistical significance using appropriate statistical tools

## Results

The p-values of various biochemical parameters were calculated, based on the one way ANOVA. De Ritis ratio was highly significant[p-value (0.000)], as compared to the other biochemical parameters viz., the total protein and A/G ratio. The total bilirubin was also highly significant (p-value 0.000).

## Conclusions

De Ritis ratio could be used as an effective biochemical marker in clearly distinguishing ALD from other diseases of liver (VH and NVH). This ratio is least in VH, intermediate in NVH and maximum in ALD. De Ritis ratio is sensitive and could thus be employed as an easy, reliable and economically viable biochemical indicator in the assessment of liver diseases, particularly ALD and irrespective of cost and utility value of other routine parameters figuring in the routine LFTs. The differential diagnosis of liver diseases assumes relevance in Puducherry and adjoining areas where prevalence of alcohol consumption is high.

## Key Words

De ritis ratio, alcoholic liver disease, hepatitis, total protein,

## Knowledge and Practice of Preventing Percutaneous Needle Prick Injuries among Interns at Mediciti, Hyderabad
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## Introduction

The common occupational risks amongst health care workers arise from their exposure to infected blood and body fluids during the course of patient care. Interns face more risk, particularly from percutaneous needle prick injuries, since they are mostly involved in collecting blood samples of infectious nature, and they either lack knowledge or do not practice the universal precautions stringently. Research from all over the country is teeming with such examples. MediCiti Institute of Medical Sciences offers orientation training to interns focusing on the hazards of needle stick injuries. We decided to assess the existing knowledge and practices of a new batch of interns regarding the hazards of needle prick injuries and its prevention. The objective of the present study is to find the level of awareness and practices about percutaneous needle stick injuries among the interns in Mediciti Institute of Medical Sciences..

## Materials and Methods

A cross sectional study was conducted at Mediciti Institute of Medical Sciences during March-April, 2012. Eighty freshly passed medical students joining as interns were included in the study. Informed consent for participation in the study was taken. Ethical clearance for the study was provided by the Institutional Ethical Committee. A structured questionnaire was designed adopting from the resources available on internet, and self-administered. Data was collected on background information of the interns, knowledge about the various modes and hazards of needle stick injuries, post exposure prophylaxis and prevention of needle stick injuries; and their practices pertaining to following universal precautions.

## Results

Data from 80 interns is available. Preliminary analysis of the data entered so far suggests that knowledge is present but the practices are unsatisfactory. The final results will be discussed during the conference.

## Conclusions

Will be drawn based on the final results.

## Key Words

Interns, needle prick injuries, exposure

## Prevalence Of Dengue Among Pediatric Population In A Tertiary Care Hospital.
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## Introduction

Dengue is a mosquito borne infection that in recent decades has become a major international public health concern. WHO currently estimated there may be 50 million dengue infections worldwide every year. Also dengue hemorrhagic fever is leading cause of serious illness and death among children in Asian countries including India. Hence we planned to conduct a study in pediatric population..

## Materials and Methods

50 children presenting with fever for more than three days were included in the study. Blood samples were analyzed for hematological parameters such as platelet count, total leukocyte count, differential leukocyte count. Dengue was diagnosed   if an IgM capture enzyme linked immune sorbent assay was positive (or) titre of IgG in convalescent sera rose four fold compared to baseline values.

## Results

Out of 15 ( 10 males , 5 females  ) clinically suspected cases , 8 cases ( 6 males , 2 females ) ( 53.5 % ) tested positive. Dengue IgM positive were 8 cases, dengue IgG positive were 6 cases .Four patients had dengue haemorrhagic fever; 6 had ,secondary dengue and warning symptoms observed were abdominal pain in 4 cases , ascites in 2 cases , hepatosplenomegaly in 4 cases , thrombocytopenia in 4 cases , persistent vomiting is observed in 2 cases .

## Conclusions

## Key Words

Dengue, Pediatric dengue, IgM ELISA, IgG ELISA

## Drug Susceptibility Pattern and Detection of Extended Spectrum B-Lactamase (ESBL) and AMPC B-Lactamase Production in Escherichia Coli and Klebsiella Isolated from Clinical Samples

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## Introduction

Antimicrobial resistance in pathogens causing important infectious diseases is a matter of great public health concern, because it increases the length of hospital stay with severely limited therapeutic options. Resistance caused by extended-spectrum β-lactamases (ESBLs) to extended-spectrum cephalosporins, penicillins among Escherichia coli (E. coli) and Klebsiella pneumoniae (K. pneumoniae) has accounted for the ever-increasing proportion of nosocomial infections in recent years. Plasmid mediated AmpC β-lactamases (pAmpC) are also emerging as a potential additional threat by causing resistance to cephamycins and are not inhibited by clavulanic acid. Hence our objective was to compare the susceptibility pattern of ESBL and pAmpC strains and non ESBL and pAmpC strains to prevent attributed high mortality in these patients..

## Materials and Methods

A prospective study conducted at Microbiology Department, Mysore Medical College and Research Institute, Mysore. Minimum of 30 E.coli and Klebsiella specimens isolated under aseptic precautions from various clinically suspected cases of septicaemia, urinary tract, wound and respiratory tract infections were included for the study. Gram's stain was used to stain the smear. Specimen inoculated on to MacConkey and Blood agar and observed for lactose fermenting colonies. Antibiotic susceptibility test: ESBL production screened and determined by the disk diffusion method. Isolates tested for susceptibility to Ceftazidime, Cefotaxime and ceftriaxone. Isolates exhibiting reduced susceptibility to one or more of these considered as potential producers of ESBL. Confirmatory test is done by Combined disk method or Inhibitor potentiated disc diffusion test. Ceftazidime versus Ceftazidime/clavulanic acid used as phenotypic confirmatory test. The production of AmpC β-lactamase suspected for isolates that are resistant to either Cefotaxime or Ceftazidime did not synergize with clavulanic acid.

## Results

Out of 25 E.coli isolates 13(52%) ESBL, 4(16%) ESBL and AmpC, 2(8%) AmpC producers, 4(16%) were resistant and 2(8%) sensitive to all. Among the 13 ESBL, 4(30.77%) each was isolated from urine, blood and exudates, 1(7.69%) from stool. Among 4 ESBL and AmpC, 1(25%), 3(75%) from urine and exudates respectively. 2(100%) AmpC producers were from stool sample. Out of 25 Klebsiella isolates, 7(28%) ESBL, 5(20%) ESBL and AmpC, 6(24%) AmpC producers and 7(28%) were resistant to all. Among blood and exudate samples, there were 5(71.43%), 2(28.57%) ESBL, 2(40%), 3(60%) ESBL and AmpC, 1(16.47%), 5(83.33%) AmpC producers and 1(14.29%), 6(85.71%) were resistant to all respectively.

## Conclusions

E.coli and Klebsiella demonstrated resistance by different mechanisms. Tests for the detection of ESBL and pAmpC producing E.coli and Klebsiella strains should be carried out in all diagnostic centers routinely. This will help to form an antibiotic policy at hospital, select proper antibiotic and help to reduce the drug resistant strains emergence.

## Key Words

Antimicrobial resistance, β-Lactamase, E.Coli, Klebsiella, Antibiotic susceptibility test

## The Anemia Project: The Impact of Nutritional Counseling and Oral Iron Therapy on Indian Females in a Resource Restricted Setting

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## Introduction

Anemia is one of the most neglected diseases in the rural Indian population and can lead to severe consequences in overall health and productivity. The treatment of anemia, especially in women, is essential in developing countries, such as India. In our study, we evaluated the proportion of anemia among rural Indian females and their compliance to oral iron therapy, in a resource restricted setting. Objectives: 1.) To study the proportion of anemia among Indian females in a resource restricted setting. 2.) To evaluate the impact of counseling on the compliance to oral iron therapy in Indian females in a resource restricted setting. 3.) To assess the response to oral iron therapy in Indian females in a resource restricted setting..

## Materials and Methods

Women were invited to a social gathering at the local

women's hospital. Formal lectures and informal discussions were held by physicians, nurses, nutritionists, and other qualified individuals on topics of nutrition, iron-rich diet, significance of anemia, and importance of women's health. The hemoglobin of 400 participants was evaluated using Sahli's hemoglobinometer. These individuals were then followed for two subsequent visits, over a period of two months. Their preliminary data, diet history, hemoglobin levels, patient reported compliance to therapy, etc. were recorded each time. Anemic patients (determined by WHO definition of anemia, hemoglobin less than 12 gm.%) were provided with 200 mg ferrous sulphate tablets to take every day for one month (until next visit). Change in hemoglobin was noted at each visit. Non-responders to therapy were referred to district hospitals.

## Results

Out of the 400 women who came to the initial gathering, 398 had anemia. It was found that 81.25% had moderate anemia and 70% of women who came back for the third visit were compliant with the oral supplementation.

## Conclusions

These are appreciable results, as in an evaluation of the Indian government's iron supplementation program, it was found that only 20% of the women who received iron supplements actually took them. Therefore, anemia can be detected and treated, safely and effectively, without the use of expensive equipment, in a low resource setting.

## Key Words

females, iron deficiency, oral iron therapy, dietary advice

## Antimicrobial Susceptibility Pattern in Neonatal Septicemia
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## Introduction

Neonatal septicemia remains a significant cause of neonatal morbidity and mortality. The organisms isolated are often resistant to multiple antimicrobials which make treatment difficult. An awareness of the risk factors associated with neonatal sepsis prepares the clinician for early detection and effective treatment, thereby reducing mortality and morbidity. The present study was undertaken to study the risk factors, spectrum of isolates and their antimicrobial susceptibility pattern in neonatal septicemia ..

## Materials and Methods

A cross sectional study was conducted from 1st May to 30th June 2011. Neonates clinically suspected of septicemia were included in the study. Detailed history was elicited from mother and blood samples were collected from neonate. The various organisms were identified by conventional methods and antimicrobial susceptibility was performed in accordance to CLSI guidelines. All patients had their haemogram measured by electronic cell counters.

## Results

Out of 40 cases, blood culture was positive in 26(65%) and negative in 14(35%) with a male: female ratio of 1.2: 1.Early Onset Septicemia (EOS) was predominant and seen in 27(67.5%) whereas Late Onset Septicemia (LOS) was seen in 13(32.5%). Out of 27 EOS cases, blood culture was positive in 17(62.9%).In LOS, blood culture was positive in 9(69.2%).The most commonly isolated organisms were Non–Fermenting Gram Negative Bacilli (NFGNB)(65.3%) and Pseudomonas Species(11.5%). The organisms were most sensitive to Imipenem and Cefotaxime (85% each) and resistant to Cefoperazone (10%) and Piperacillin (15%).Considering the maternal risk factors, maternal fever (p=0.005) and Prolonged rupture of membranes >12 hrs. (p=0.002) were found to be significant. In neonatal risk factors, Neonatal Resuscitation (p=0.05) and Low birth weight (p=0.057) were significantly associated with neonatal septicemia. Hematological markers like TLC (p=0.001) and CRP (p=0.001) were highly sensitive.

## Conclusions

Most gram negative bacteria showed resistance to commonly used antibiotics like Ampicillin, Piperacillin and Cefoperazone. However most bacterial isolates showed sensitivity to Imipenem and Cefotaxime. Therefore, continuous microbial surveillance of NICU is important.

## Key Words

neonatal septicemia, neonates, gram negative bacteria, antibiotic sensitivity test.

## Ureteric Colic
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## Introduction

Currently almost all ureteric stones can be removed by non-or slightly invasive methods. Most patients do not

understand mechanism of stone formation and Patients have no symptoms between episodes of renal stone colic. Moreover preventing recurrence must continue for long time..

## Materials and Methods
In a prospective hospital based observational study, 30 patients were studied to understand causes of ureteric colic, medical and surgical interventions required for its treatment. We collected data on family history, drug history, and history of previous illness and interventions.

## Results
Many patients presented with the complaint of pain in lower abdomen. A few patients came with the complaint of pain in loin region which was radiating to the groin. The patients with small sized stones were relieved with the help of hydration therapy and larger size stones were removed by cystoscopy and a patient with hydronephrosis was fitted with JJ stent.

## Conclusions
Renal stones can present with colicky pain, haematuria, urinary retention, nausea and vomiting and presentation vary with position of calculus.

## Key Words
uretric colic,etiology, unawareness,recurrence

## Prevalence of Oral Changes and Disease in Pregnancy
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## Introduction
Hormonal fluctuations during pregnancy affect more than woman's reproductive system and surprisingly have a strong influence on the oral cavity. These changes are best explained as the effect of local factors like bacterial plaque and tartar on tissues exacerbated by hormonal activity. Usually pregnant women experience nausea and vomiting which add to the bacteria that accumulate on tooth surfaces. The present study was carried out to find out the prevalence of oral changes and diseases in pregnant women..

## Materials and Methods
We randomly selected 30 pregnant women in each trimester (n=90) attending ANC clinic of NKPSIMS and LMH. Their oral and dental examination was carried out

and findings were recorded in the case record form.

## Results
Gingivitis (31.11%) was the most prevalent oral manifestation associated with pregnancy followed by tooth decay (26.67%), halitosis (14.44%), altered taste (14.44%), dryness of mouth (8.89%), sensitivity to hot, cold and sweets (7.78%), periodontitis (5.56%) and tooth erosion (2.22%). It was also noted that none of the pregnant women were aware of oral and dental care during pregnancy.

## Conclusions
Pregnant women have special oral health needs and considerations. There is also a need for enhanced education and training of maternity care providers concerning oral health in pregnancy.

## Key Words
Prevalence, Oral Changes, Oral Diseases, Pregnancy

## Admission Test as Screening Test to Predict Fetal Outcome
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## Introduction
Study population: 50 pregnant women -low and high risk-admitted to the labour ward were enrolled in the study. Women were considered low risk if their gestational age was between 38 and 40 weeks, or they had spontaneous or induced labour pains, had cephalic presentation and lacked obstetric/ medical complication. Women were considered high risk if their pregnancy was prolonged, they had pregnancy induced hypertension, oligohydramnios, gestational diabetes mellitus, heart disease, anemia, previous lower segment Caesarean section, or mal presentation Admission Cardiotocography test was done in all patients and they were followed up. To evaluate outcome of pregnancy, fetal distress was diagnosed if fetal heart changed enough to warrant a Caesarian section or required a vacuum-assisted delivery or the new born had Apgar score <7 at 5 minutes following spontaneous delivery..

## Materials and Methods
Study population: 50 pregnant women -low and high risk-admitted to the labour ward were enrolled in the study. Women were considered low risk if their gestational age was between 38 and 40 weeks, or they had spontaneous

or induced labour pains, had cephalic presentation and lacked obstetric/ medical complication. Women were considered high risk if their pregnancy was prolonged, they had pregnancy induced hypertension, oligohydramnios, gestational diabetes mellitus, heart disease, anemia, previous lower segment Caesarean section, or mal presentation Admission Cardiotocography test was done in all patients and they were followed up. To evaluate outcome of pregnancy, fetal distress was diagnosed if fetal heart changed enough to warrant a Caesarian section or required a vacuum-assisted delivery or the new born had Apgar score <7 at 5 minutes following spontaneous delivery.

## Results

All women were between 20-29 years, majority of them were primipara (95%) and at term (72.5%).Majority of women showed reactive changes: 38 (95%), equivocal in 1(2.5%) and ominous in 1 (2.5%). In 38 women with reactive AT, 20 (52.7%) had normal vaginal delivery, and 18 (47.3 %) had LSCS delivery. Both the women with equivocal and ominous AT had LSCS delivery. Out of the 40 laboring women, 90 (90%) women had clear liquor and 10% had meconium stained liquor.

## Conclusions

Cardiotocography can be used as an effective screening admission test to evaluate the fetal distress.

## Key Words

Corometrics cardiotocography, apgar score, omnoius FHR

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### Aptitude Evaluation for Medical Profession in First and Final Year M.B.B.S. Students

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## Introduction

The medical professional's job is not easy. To have the right attitude: hard work, sleepless nights, preparedness for a kaleidoscope of emotions, service over economics, willingness to look death in the eyes- the medical professional has to have the right aptitude. But does the undergraduate choose the profession because it is in concordance with his temperament and personality i.e. the aptitude or are there other factors responsible for his/her choice? Currently in India, there is no structured program for youngsters to assess themselves and to make an informed choice when it comes to choosing a

profession. Our study will highlight the problems faced by medical undergraduates who have taken up a profession which may or may not be to their liking. Our study aims to- 1) determine the proportion of medical students with high aptitude. 2) Compare the aptitude for medical profession between male and female students. 3) Determine the correlation between knowledge of English language and their reasoning powers..

## Materials and Methods

The study was conducted at NKP Salve Institute of Medical Sciences, Nagpur. 250 students of first and final year M.B.B.S. from NKP SIMS, Nagpur, who were willing to take the test were included in the study. A questionnaire was used to test their abilities, within a stipulated time of 2 hours. It was a cross sectional type of study. Differential Aptitude Test Battery (DATB Test) -a validated, questionnaire based, objective, timed test- was used.

## Results

38% of 250 students have the aptitude for medical profession. 26.66% of first year students and 51.34% of final year students have the aptitude for medical profession. Also, 31.57% of Male students and 41.70% of female students have high aptitude. Moreover, the educational aptitude i.e. the ability to learn from books and through teachers is average in 28% of students. 31.34% of these students have average skills in English language while only 14% have high skills. 22% have aptitude in the Engineering field and 23% in Architecture, while only 8% have an aptitude in Journalism and Law.

## Conclusions

1) Students should be aware of their strengths and weaknesses. 2) The teachers should assess the abilities of individual students and modify their teaching techniques to address the felt needs of weak students. 3) Students should be encouraged in those fields in which they have a strong aptitude.

## Key Words

Aptitude Evaluation, DATB test, Awareness of abilities, encourage strengths

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### Rationale of using simple

## Hematological tests in preliminary diagnosis of early onset neonatal septicemia
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## Introduction

India's current neonatal mortality rate of 44 per 1000 live births represents. 1.2 million Newborns who die each year. Neonatal sepsis is the single most important cause of neonatal mortality accounting to 30-50 % of all neonatal deaths. Given the high burden of neonatal sepsis in India, I decided to evaluate the utility of indirect hematological parameters in its early diagnosis.

## Materials and Methods

The present prospective study was done during May and June of 2011 at Niloufer Hospital, Hyderabad. 100 neonates in the age group 0-72 hours who were admitted to ICU, presenting with clinical signs of sepsis were included in the study. A complete blood picture including total leukocyte count (TLC), band: neutrophil ratio (B: N ratio), evaluation of toxic changes in neutrophils and platelet count (PLT) was performed by peripheral blood smear examination. Micro ESR was measured in micro hematocrit capillary tubes after standardization. C Reactive Protein (CRP) titre was measured serially by latex slide agglutination test. Results of all investigations evaluated were correlated with blood culture findings and statistically analyzed using chi-square test.

## Results

Out of 100 neonates evaluated, 34 were blood culture positive and 66 were blood culture negative.68 % of them were premature at birth. The sensitivities and specificities of TLC, B:N ratio, Toxic changes in neutrophils, Micro ESR, CRP, PLT count were 47% and 66.7%, 88.2% and 63.6%, 70.5% and 63.6%, 70.5% and 84.8%, 88.2% and 84.8%, 47% and 66.7% respectively.

## Conclusions

Among the parameters evaluated, CRP, B: N ratio, Micro ESR showed high correlation with blood culture findings. These parameters are simple, quick and cost effective and do not require any sophisticated equipment. They can be performed easily at grass root level and can provide a window to the diagnosis of neonatal sepsis so that patient can be started on empirical treatment much before the blood culture reports are obtained, thereby improving their chances of survival.

## Key Words

Bilirubin.

## Effect of Different Musical Tempo on Cardiovascular and Respiratory Parameters in Young Adults during Resting State
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## Introduction

Listening to music is a complex phenomenon involving psychological, emotional, neurological and cardiorespiratory changes. In the present study, effect of different musical tempo i.e. rhythm on physiological and psychological parameters were tested in healthy persons in resting state..

## Materials and Methods

Forty healthy female volunteers aged between 17-21years were randomly selected in the study. Instrument: Computerised Polyrite – D (4 channels) was used which include ECG limb leads for monitoring cardiovascular parameters and chest belt to monitor respiratory rate. IPod with headphone was used for playing background music. Each subject was given rest for 20 min and baseline record of all parameters was taken for 5 min. Parameters used were Maximum heart rate, Minimum heart rate, Ratio of Maximum to Minimum heart rate, Mean heart rate and Respiratory rate. Then the music with fast tempo was played to subjects through headphone for 5min, all parameters were recorded simultaneously, for "effect of fast tempo music" record. Similar procedure was done for slow music record with gap rest of 20 min. Data was presented as mean and S.D. Differences among the control, slow and fast tempo music group were determined by ANOVA test. P value < 0.05 was considered significant.

## Results

Heart rate- minimum, maximum, mean and ratio of minimum to maximum- did not show any statistically significant difference between control, during fast music and slow music. Heart rate rose during control condition, decreased subsequently during fast music and further decreased significantly during slow music whereas respiratory rate is increased during fast music condition and decreased during slow music as compared to control.

## Conclusions

Maximum heart rate and respiratory rate were decreased during slow tempo music as compared to control condition or fast tempo music, concluding that it may be due to

direct effect of synchronization of sympathetic and vagal outflow as well as indirect effect by changing emotions and behavior

## Key Words

## Serodiagnosis of Scrub Typhus Infection: Comparison of IgM Enzyme Linked Immuno Sorbent Assay (ELISA) and Weil-Felix Test

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## Introduction
Scrub typhus, an acute infectious disease caused by Orientia tsutsugamushi, is endemic to India. A recent report suggests that there is resurgence of this disease in some parts of India. The diagnosis and surveillance of this disease is challenging due to its non-specific clinical manifestations, lack of advanced laboratory diagnostic techniques. The diagnostic tests available are not straight forward and have their limitations. Therefore, this study is undertaken to evaluate Weil-Felix and IgM ELISA so that improved diagnostic method can be used for diagnosis of Scrub typhus infection..

## Materials and Methods
This was a cross-sectional study. Venous blood samples from 100 patients, who presented with an acute febrile illness to the hospital sent to Microbiology laboratory for IgM ELISA for Scrub typhus infection were included in the study. IgM ELISA was done according to standard procedure using ELISA kit by InBios International. Weil-Felix test was performed according to standard procedures using whole cell antigens prepared from OX-K strains of Proteus vulgaris. Correlation between IgM ELISA and Weil-Felix tests was done using correlation regression analysis.

## Results
Out of 100 patients with suspected Scrub typhus, 56% were males and 44% were females. Age ranged from 3 years to 80 years. Among them 8 were children and 92 were adults. IgM ELISA had a sensitivity of 84% and a specificity of 61%.The positive and negative predictive value of IgM ELISA was 49% and 10% respectively. The specificity and sensitivity of Weil-Felix test was 89% and 49% respectively. The positive and negative predictive value was 84% and 39% respectively. False positive reactions to IgM ELISA were observed in patients with falciparum malaria infection, typhoid fever and acinetobacter septicaemia.

## Conclusions
Comparing both the tests IgM ELISA was very sensitive but lacks specificity. Weil-Felix test was highly specific for scrub typhus infection but has a disadvantage of low sensitivity. Though the sensitivity of Weil-Felix test is low, it is specific for Scrub typhus infection and thus it can be used in remote areas with minimum facilities.

## Key Words

## Incidence Of New Onset Diarrhoea In Intensive Care Patients With The Length Of Stay Greater Than 3 Days

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## Introduction
Diarrhoea in the intensive care unit is a frequently encountered problem. As many as 41 % of patients will have an episode of either short-lived or protracted diarrhoea while in the intensive care unit. The causes are numerous and a logical approach to their identification is essential.

## Materials and Methods
We conducted a study to explore the profile of diarrhoea in the intensive care unit (ICU) of Shri Krishna Hospital, Karamsad, from February to March 2012. Patients who presented 3 or more episodes of liquid evacuation in 24 hours , free of gastrointestinal diseases, had no diarrhoea at the time of admission and who were immunocompetent were considered as diarrhoea cases. Information was requested in person concerning any episodes of diarrhoea in ICU patients and a daily review of the patient was taken. A published definition for diarrheic faeces (Bristol score 7) was used. Information was elicited for enteral diet, length of stay in the ICU, systemic antibiotic therapy, antibiotic type, use of laxatives and other drugs. A descriptive analysis of the data was performed.

## Results
The incidence of nosocomial diarrhoea in our ICU was 10.08% (12 out of 119). Amongst the cases, 8 were females and 4 were males. Nine were less than 60 years of age. Out of the 12 cases, 8 patients had a hospital stay of

more than 7 days. Nosocomial diarrhoea was detected in patients with use of antibiotics like Imepenam (n=3), Clindamycin (n=3), Metronidazole (n=6), fluconazole (n=3), Levofloxacin (n=5), Piperacillin, tazobactum (n=4). A high number of patients on ondansetran (n=4) developed diarrhoea. Enteral feeding and type did not show any increased incidence in diarrhoea.

## Conclusions

The incidence of nosocomial diarrhoea in our ICU was low compared to the published literature.

## Key Words

Nosocomial infections, diarrhoea, antibiotics, intensive care

## Detection of Brucella Genome by PCR in Symptomatic Cases of Anand District with High and Low Level Risks of Exposure
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## Introduction

Human Brucellosis is an important, but highly neglected, re-emerging zoonosis with global distribution. In the farms, dairies, and villages of India, it poses a serious public health challenge because of: the close proximity between livestock and humans that facilitates rapid transmission of disease, and the tendency for lower socioeconomic class villagers to consume raw unpasteurized dairy products. The study aimed to detect Brucella genome through PCR in symptomatic, high-risk and low-risk human cases in Anand district..

## Materials and Methods

The study was conducted after confirmation of approval from both the Ethics Committee of the institution, and from ICMR, under Short Term Studentship Program 2011. A total of 107 high and low risk, symptomatic and asymptomatic individuals living in Anand district gave consent to participate in the study, out of which 58 had at least one medical complaint/symptom. DNA extraction and PCR with B4/B5 genus specific primers for bcsp31 gene was performed on the blood samples of the 58 symptomatic cases, and Standard Tube Agglutination Test (SAT) was performed on serum samples of all 107 participants.For positive controls, standard B. abortus and B. mellitensis strains were obtained from the Indian Veterinary Research Institute, Izatnagar, India. DNA extracted from the blood and isolates obtained from the

placenta of an infected cow facing abortion were used to standardize the PCR. Autoclaved, nuclease-free distilled water was run as the negative control. Positive and negative controls were run with each PCR reaction. Data were analyzed by SPSS software.

## Results

PCR detected Brucella genome in 43 of the 58 symptomatic cases, indicating that 74.1% of high and low risk symptomatic cases suffer from Brucellosis and that substantial intervention is needed. Serology detected only 2 seropositives out of 107, indicating that SAT has low sensitivity in Anand district. A significant statistical relationship was found between previous history of Pyrexia of Unknown Origin and PCR positivity (p value 0.037).

## Conclusions

This suggests that that health professionals need to start keeping Brucellosis in mind as a differential diagnosis when seeing patients with unusual combinations of symptoms and test results.

## Key Words

Brucellosis, Anand, PCR, bcsp31

## Prevalence of high blood pressure among school going children (10-15 years) in Chidambaram, Tamil Nadu, India
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## Introduction

Hypertension is becoming the commonest cardiovascular disorder posing a challenge to the countries in socioeconomic and epidemiological transition, contributing a lot to the morbidity and mortality. "Tracking" of high blood pressure in children is of potential value in preventing the risk factors in those who are at increased risk of developing primary hypertension in the adulthood and those who might benefit from earlier intervention and follow-up, since the roots of hypertension start growing in childhood. This study was aimed at finding out the prevalence of high blood pressure among school children.

## Materials and Methods

Between March and April 2012, we recorded blood pressure, three readings, five minutes apart, by sphygmomanometer of 300 students of 6 to 9 classes of

Ramakrishna Higher Secondary School Chidambaram, Tamil Nadu. Mean of these three readings was considered as the subject's blood pressure. Socio economic and baseline attributes of the subjects were assessed for correlation. For children aged between 10-15 years, blood pressure of ≥110/70mmhg was considered as higher readings.

## Results

The prevalence of high blood pressure was 4%; half of the hypertensive children were in the age group 14-15 years. The mean systolic and diastolic blood pressure was higher in males than females. Subjects with higher BMI showed relatively high blood pressure readings.

## Conclusions

All school children should have routinely measured their blood pressure.

## Key Words

High blood pressure, Tracking, Hypertension, Childhood

## Magnitude of Chronic Cervicitis and Its Related Factors among Women Attending Gynaecology OPD in a Tertiary Health Centre – Tamilnadu
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## Introduction

Chronic inflammation of the cervix is seen in about 80% of women with gynecological complaints. Chlamydia trachomatis and other pathogens are associated with upper genital tract infections, pregnancy complications or sexually transmitted Infections (STI). Neglected asymptomatic patients can serve as a reservoir of STI which underscores the importance of combined culture and pap smear examination. The objective of this study was to assess the magnitude of chronic cervicitis and its association with socio-demographic variables..

## Materials and Methods

This study was conducted among women attending the Gynaecology out- patient department of Rajah Muthiah Medical College and Hospital (RMMCH), Annamalai University, Chidambaram. They were interviewed and data was collected on age, occupation, education, marital status, parity, menstrual history, contraception, systemic illness, etc. Clinical examination (speculum examination) and selected investigations was done. The frequency of

chronic cervicitis and associated risk factors were assessed.

## Results

Staphylococcus aureus (42%) was found to be the most common organism causing cervicitis besides E.coli (2%), Chlamydia (6%) and Klebsiella (2%). Clinical study revealed that 82% of the patients presented with white discharge, 34% with cervical erosion and 11% with cervical hypertrophy. Prevalence of cervicitis in various age groups: 20-30, 30-40, 40-50 and 50-60 years were 21%, 27%, 33% and 50% respectively. There was no significant variation of the illness based on parity. Poor menstrual hygiene was found in 68% of patients examined. 52% were unaware of contraception. Common presenting symptoms include hypogastric pain(84%), back-ache(74%), itching vulva(48%) and heaviness in the pelvis(52%).

## Conclusions

The findings of this study should make women aware of the importance of periodic screening for STDs and also help health professionals design control measures for chronic cervicitis.

## Key Words

Chronic cervicitis, Pap smear, socio demographic variables, Sexually Transmitted Infections

## Knowledge, Attitude And Practice Regarding HIV/AIDS In Antenatal Mothers Attending Tertiary Care Hospital
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## Introduction

Growing menace created by HIV/AIDS has alarmed not only public health officials but also the general community. The reason for choosing this title as research work is the vastness of the problem statement of HIV/AIDS as UNAIDS states that mother to child transmission is the largest mode of transmission in children below 15 years of age and accounts for 21-43% transmission in developing countries. The objectives of study were to find out knowledge about HIV/AIDS in antenatal mothers, awareness regarding its mode of transmission and myths related to it so that suitable recommendation measures can be suggested to create awareness regarding HIV/AIDS..

## Materials and Methods

This cross sectional analytical study was carried out in the obstetrics OPD of the hospital with Sample size of 400. Questionnaire consisted of 9 questions for women's demographic profile, 11 questions for their knowledge, 9 questions for attitude, 10 questions regarding practice for HIV/AIDS. The results obtained were analyzed on basis of educational categories which were defined as below secondary school (<12th standard) and above secondary school (>12th standard). Calculation was based on simple percentage method. Questions were both closed and open-ended.

## Results

Out of 400 respondents 73 had never heard of AIDS and out of these 73 women 57 were illiterate. Among the 327 women 291(89%) believed that HIV can spread from one person to other.158 (54%) were educated above secondary level and 133(46%) were educated below secondary level. Out of 291 women 244(84%) women believed HIV spreads from mother to child; Mosquito bite, handshake, sharing of towels were identified by 12%, 20% and 17% respectively as modes of HIV transmission.

## Conclusions

Antenatal mothers were having satisfactory knowledge regarding HIV. Most answers were given correct for mode of transmission of HIV/AIDS and its prevention. There are many myths related to its mode of transmission.

## Key Words

mode of transmission, myths

## Prevalence And Determinants of HIV & HBsAg Among Antenatal Mothers Attending Tertiary & Secondary Care Hospitals At Bareilly

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## Introduction

HIV and Hepatitis B are devastating diseases causing serious global and public health problems and are rampant in this part of the country. Vertical transmission results in serious antenatal and infantile complications. HIV and HBsAg have been documented to be the largest source of chronic infections in this group. Large scale studies are thus required for their detection and evaluation..

## Materials and Methods

The study will be carried out in Department of Pathology and will include all patients attending Antenatal OPD of Rohilkhand Medical College & Hospital, Bareilly and few other secondary care hospitals in Bareilly over a period of January 2009 to December 2011.

## Results

A total of 30,162 patients attended Antenatal OPD during a period of three years (January 2009 to December 2011), of these 25,336 patients registered with ICTC for pre-test counseling. A total of 20,699 patients were tested for HIV and 12 were found to be seropositive (0.057%). The data suggests that the refusal rate for HIV testing is as high as 31.37%. Maximum number of HIV seropositive cases were in the age group of 20-25 years (66.66%) followed by 25% in the age group of 26-30 years. The number of patients tested for HBsAg were 20,941, of these 37 were seropositive (0.17%). The carrier rate for HBsAg was 2.7%. Maximum no. of seropositive cases were in age group of 20-25 years (45.94%) followed by 24.32% in age group of 26-30 years.

## Conclusions

The seroprevalence of HIV among antenatal mothers is low which is in contrast with current statistics which show HIV prevalence among antenatal population in U.P. close to nil. However, the refusal for uptake of screening for HIV is very high (31.37%). The seroprevalence of HBsAg is also low though greater than HIV. Thus, it is the need of the hour for extensive screening of antenatal population to know the rising trends to help us take plausible interventions to prevent vertical transmission.

## Key Words

Vertical transmission, HIV/HBsAg, Antenatal infections

## Lifestyle Disease Risk Factors among School Going Adolescents of Urban Bareilly

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## Introduction

The rising burden of preventable risk factors for life style diseases among adolescents is a major public health challenge worldwide. This study was conducted to identify the preventable risk factors for life style diseases in adolescents..

## Materials and Methods

This cross-sectional study was undertaken amongst adolescents aged 10-19 years studying in classes 9th-12th

of senior secondary schools of urban Bareilly. The schools and students were selected randomly. The students were surveyed through a self-administered questionnaire after taking consent from their principal. Dietary practices, physical activity, tobacco and alcohol use were assessed. Blood pressure and body mass index were measured. The data were analyzed using SPSS software.

## Results

Out of a total of 250 participants, 62% were males. Although the past smoking rate was observed to be 5.2%, only 4.8% were currently smoking. Also 4.8% were currently using smokeless tobacco. A total of 3.2% respondents admitted that they had consumed alcohol in last 30 days and 5.2% had consumed alcohol in the last. Only 29% were involved in brisk walking and cycling for at least 30 minutes continuously thrice a week.15% regularly practiced yoga. About 52% were non vegetarians. Nearly 71% consumed adverse food items such as fried food, cheese, butter, meat, egg, sweetened drinks, pizza, burger, bakery items, pickles and sauces daily. Only 64% consumed fruits for at least three days while 76% consumed fruits for at least three days in a typical week. Also 24% added extra salt to cooked food items. The overall prevalence of hypertension was 12%. About 64% were underweight, 28% were normal while 8% were overweight.

## Conclusions

The high prevalence of lifestyle disease risk factors among the adolescents in our study suggests an early initiation of lifestyle disease among them in future. Adoption of healthy lifestyles by all adolescents is critical for the prevention of lifestyle diseases.

## Key Words

School going, adolescents, urban, lifestyle disease, risk factors

## Clinico-Radiological Study of Tuberculosis in Smokers - A Comparative Analysis
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## Introduction

India has highest burden of tuberculous in the world- about a third of the Indian population is infected with mycobacterium tuberculosis. The WHO report [ 2008 ] estimated about 9.2 million new cases and 4.1 million new smear positive cases in 2006. Smoking is a risk factor

for tuberculosis: it increases the tuberculosis risk by decreasing immune response, mechanical disruption of cilia function, defects in macrophage response, decrease in CD4+ count and reduces lysozyme A activity, enhances the entry of bacteria in alveolar tissue..

## Materials and Methods

We enrolled outpatients and inpatients of TB and Chest department of Rohilkhand Medical College Bareilly between January 2010 and June 2010. The study group 1 comprised of sputum positive and sputum negative patients with pulmonary and extrapulmonary tuberculosis. The group 2 comprised of Sputum positive and sputum negative non-smoking patients with pulmonary and extrapulmonary tuberculosis.

## Results

In our study, there were 65 cases (52 patients with pulmonary tuberculosis) and 35 controls (10 patients with pulmonary tuberculosis. [p<0.001]. Sputum positivity (+++) was maximum in light, heavy and very heavy smokers and all heavy smokers were +++ sputum positive. Cough [98.4%] and, dyspnoea [93.9%] were more prevalent in smokers and were statistically significant [p<0.001]. Radiological cavitatory lesions [98.07%] and fibrosis [98.07%] were more common in cases.

## Conclusions

Smoking is a risk factor for pulmonary tuberculosis but not for extra pulmonary tuberculosis.

## Key Words

Smoking,Pulmonary Tuberculosis,Extra Pulmonary Tuberculosis,Sputum positivity

## Awareness of Cervical Cancer in Reproductive-Age Group Women in Rural Village, Afzalpur, Ghaziabad and Extending Cervical Cancer Education Activities in Rural Areas
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## Introduction

Cervical cancer is the third largest cause of the cancer deaths in India, with the age-adjusted incidence of 30.7 per 100,000 women (highest relative to that of all other types of cancer). The prevalence and burden of cervical cancer is much higher among rural women mainly due to the lack of access to screening and health services, and lack of awareness of the risk factors of cervical cancer. HPV

infection and precancerous lesions go unnoticed and develop into full blown cancer before women realize they need to go for medical help..

## Materials and Methods
A study on reproductive age group women in Afzalpur village was undertaken. Structured questionnaire was used to assess the knowledge of cervical cancer. Basic data regarding awareness, knowledge, traditional beliefs, risk factors, preventive measures and other issues were included in the questionnaire. The data was analyzed using SPSS – 11. Women were also told about the effectiveness of preventive strategies, benefits to the entire family and were motivated to get screened for the cervical cancer.

## Results
A total of 490 females of the age group 20-45 years were interviewed. The data is being analysed. The results of the study are awaited.

## Conclusions
Women must be educated and screened for cervical cancer. Mass campaigns may help achieve this objective.

## Key Words
rural awareness, risk factors, cervical cancer, prevention

## Altering Lifestyle Trends Predisposing Rural Population to Coronary Heart disease in Urbanizing Villages of India
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## Introduction
Urbanization has led to a massive shift in the villages from farming to an almost sedentary lifestyle, but the dietary intake is still high on fats, particularly ghee and milk cream. On the other hand, alcohol consumption and tobacco smoking is on a steep rise in such regions, making people more prone to conditions as CHD (Coronary Heart Disease). This study was undertaken to assess the impact of changing patterns in lifestyle, on the risk of CHD in urbanizing villages..

## Materials and Methods
Population sampling was carried out, using Random Sampling Method, for men and women between 40 and 64 years of age, in the urbanizing village of Nangal Kalan (Distt. Sonepat, Haryana), and the risk factors were quantified for CHD. A total of 800 people were screened; 400 in the urbanizing village, on the basis of a structured

questionnaire, including dietary intake (particularly saturated fat intake), related past and family history (HTN, diabetes, and CHD), personal history (tobacco smoking and alcohol consumption), physical workout and basic physical examination (BMI, BP). Preliminary screening was followed up by proper investigations (S. cholesterol and ECG) in selected cases (all hypertensives and high risk individuals). As a control, another 400 people were screened in the rural village of Kansala (Distt. Rohtak, Haryana), with the same approach.

## Results
The examined 800 subjects were given scores according to the severity of the risk factors. Methods were employed to calculate fat intake and part of the energy supplied by it out of the total calorie intake. In N. Kalan, 128 people got scores over 13(on a scale of 32) and were regarded as very high risk individuals. 156 were high risk falling in the range of 11-13, 99 had moderate risk and 17 were low risk with scores <7. In contrast, 37 very high risk individuals were found in Kansala village, along with 101 high risk, 139 moderate risk and 123 low risk individuals.

## Conclusions
People in the urbanizing villages are at greater risk of developing CHD compared to the still rural villages of the country. Thus, people need to be made aware and suggested ways to co-op up with urbanization and decrease the risk of developing CHD. Lifestyle modifications such as, to limit saturated fat intake, regular physical workout, decrease in consumption of alcohol and tobacco should be suggested to help the urbanizing India fight CHD.

## Key Words
CHD, fats, alcohol, tobacco, physical workout

## To determine the Knowledge and Attitude of Fathers about Breastfeeding In Bijapur: A Cross Sectional Study
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## Introduction
Breastfeeding has been found to lower the infant mortality rate. Various factors can encourage or discourage women's decision to breastfeed. A well-informed father can significantly increase the chance that the baby is breastfed. Their knowledge and attitude towards breast feeding can influence the decision to breastfeed the baby.

This study highlights the areas where knowledge amongst fathers about breastfeeding could be lacking..

## Materials and Methods

We conducted this study at Shri B.M. Patil Medical College and Hospital, BLDE University, Bijapur, Karnataka. Eighty fathers with a child ≤ 2 years, attending the Paediatric outpatient department of the hospital were administered an open-ended questionnaire to assess their knowledge of breastfeeding. We collected data on their education level, income, religion, social bondings, family background, attitudes, family network and antenatal clinic visits.

## Results

87% of fathers (81% Hindus and 19% Muslims) were > 30 years of age. Only 6% said that they discussed breastfeeding with their partner. About half the fathers said that the child must be breastfed within 4 hours of birth; 15% thought that cow's milk, sugar water, honey, milk supplements, dates may precede breast feeding. Nuclear family fathers were more informed about factors such as giving Colostrum (p <0.01), demand feeding (p <0.03), satiety, period of breastfeeding >18 months (p <0.005). Joint family fathers, especially Muslims, had stronger cultural beliefs and considered breast milk to be adequate (p < 0.000). By contrast, Hindus from nuclear family would start breast feeding with each session lasting >15 minutes and supplement it at 6 months (p < 0.001).

## Conclusions

Well-informed and health-educated fathers can significantly impact the practice of breastfeeding.

## Key Words

breastfeeding practice, Indian fathers, Health and nutrition of infants

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## Factors Affecting Morbidity and Mortality in Emergency General Surgery

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## Introduction

Emergency surgery is defined as non-elective surgery that is performed with the aim to prevent morbid or fatal health consequences of a surgically treatable disease. Despite the focus on quality improvement in surgery, studies continue to show that emergency status contributes significantly to morbidity and mortality in patients undergoing emergency general surgeries. The most common emergency surgical presentation is bowel obstruction, appendicitis, perforative peritonitis, obstructed hernia and bleeding. Complications resulting from emergency surgeries lead to worsened clinical status, emotional and financial burden to patients and families, and additional hospital costs..

## Materials and Methods

All surgical inpatients coming to B M Patil Medical College, Hospital and Research Centre, Bijapur in whom emergency general surgery was done within 12 hours of admission were studied for a period for 2 months and followed up for a month. History of patients was noted. APACHE SCORE calculation was done. Post-operative complications were noted which include bleeding, surgical site infection, and sepsis, urinary, cardiac, respiratory, and deep vein thrombosis. We categorized patient with and without complications and looked at the association of risk factors with outcome : sex, transfer(from home or other hospital), wound class, ASA class, DVT prophylaxis, antibiotic administration, sepsis, diabetes mellitus, steroid use, COPD, smoker.

## Results

Total 20 patients were included in our study out of which 12 patients developed complications, Bleeding in 4 patients, surgical site infection in 4, respiratory in 2, and cardiac in 1 patient. 2 patients expired. It was found that complications occur in patients with impaired renal function test, hypoproteinemia, anemia, and old age.

## Conclusions

Emergency general surgery patients with postoperative complication are likely to be older, male, smokers, have increased blood glucose and creatinine levels, lower albumin levels, and longer surgical times.

## Key Words

Emergency general surgery

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## Dipping Tobacco And Cardiovascular Risks In Young Adults

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## Introduction

Dipping tobacco (DT), also known as moist snuff, a form of smokeless tobacco, produces health hazards such as oral cancer, increased heart rate, and brain damage. The current study evaluates the extent of the impact of DT use on the cardiovascular system compared to non- users of

nicotine in any form using pulse wave analysis. This is done so as to disprove the developing wrong notion among the young adults that DT is less harmful than tobacco used in other forms..

## Materials and Methods

Subjects, 60 males of age group 18-30 years with no history of cardiovascular illness, were grouped in two equal groups. Control group comprised of healthy non-smokers and study group comprised of regular users of dipping tobacco for at least 1 year. The subjects answered for Fagerstorm's nicotine dependence questionnaire – smokeless tobacco. Blood pressure was measured with a digital sphygmomanometer and pulse wave analysis was done by finger plethysmograph. Systolic and diastolic blood pressures, pulse rate, transit time of pulse, reflection and stiffness indices and heart rate were recorded. Mean arterial blood pressure, body mass index and pulse pressures were calculated.

## Results

A noted rise in the systolic pressure and greater decrease in the pulse rate was seen in the study group. The pulse pressure showed a significant rise .The primary pulse wave analysis parameters like reflection index and stiffness index showed a significant increase from the control group. The pulse transit time that shows the velocity of blood flow in the arteries was found to be increased significantly.

## Conclusions

Small and large artery stiffness is greater in dipping tobacco users along with increase in basal heart rate and blood pressure. Hence there is a definite negative impact of tobacco on cardiovascular system irrespective of the mode of use.

## Key Words

dipping tobacco, cardiovascular risks, artery stiffness, young adults.

## The "A" and "B" Of Medical Professional Students
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## Introduction

Education is a process, the chief goal of which is to bring about desirable changes in knowledge, skills and development of attitudes and thereby in their behavior of the learner. Assessment is considered to be the most important factor that drives student learning. Medical students are driven by the fact that they are going to be assessed by the end of the academic year for their progress to the next year. So we planned to assess the medical students' with regards to teaching, learning methods integrated teaching program, test and its effects..

## Materials and Methods

505 medical students were administered a questionnaire with 40 questions which enabled us to gather information with personal information like friends and aim, dream. The anonymity of the student was maintained, thereby facilitating them to fill the form without any apprehension.

## Results

Small group teaching was the most preferred followed by self-reading method and only a small group required large group teaching like lecture class. 325 students said that their teachers helped them achieve their targets. 36% students aimed to become successful doctors, 3% wanted to serve people, 29% wanted to become specialist like cardiologist, gynecologist, pediatrician, psychiatrist, ophthalmologist, dermatologist, or anesthetist.

## Conclusions

Small group teaching was the most preferred way of teaching by the students,

## Key Words

Teaching, Learning, Small group teaching.

## Detection of Antimicrobial Susceptibility Pattern and ESBL (Extended Spectrum Beta Lactamases) Production of Gram Negative Bacteria In Urinary Tract Infections (UTI).
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## Introduction

Urinary tract infections (UTIs) are one of the most common bacterial infections encountered by both general practitioners and hospital doctors. A single bacterial species, Escherichia coli, causes majority of UTI and other gram negative bacilli like Klebsiella, proteus, pseudomonas can also cause UTI. Acute UTIs are associated with substantial morbidity and problems of recurrent infections. About 25% of women with first UTI will have another attack within 6 months. UTI is responsible for a large proportion of antibiotic consumption in and out of

the hospital..

## Materials and Methods

Collection of sample: Clean catch midstream urine was collected using standard sterile technique from 50 patients having signs and symptoms of UTI. All urine samples were cultured on cysteine lactose electrolyte deficient (CLED) medium. The plates were incubated at 37°C for 24 hours. Identification of isolates were done using standard microbiological techniques. Antimicrobial susceptibility testing was done on Mueller Hinton agar by disc diffusion method using National Committee for Clinical Laboratory Standards (NCCLS) guidelines6. Reference strains of E. coli, ATCC 25922, and Pseudomonas aeruginosa, ATCC 27853, were used as controls for the gram-negative bacteria and are included in all daily runs. ESBL detection: Disk diffusion method were used to confirm ESBL production by all strains. Ceftazidime (30μg) vs. Ceftazidime/ clavulanic acid (30/10μg) were placed on to Mueller Hinton agar plate lawned with the test organisms.

## Results

From the 50 urine samples collected from patients having symptoms of UTI, we isolated 21 uropathogens: 9 (43%) were E.coli, 4 (19%) were proteus spp., pseudomonas and Klebsiella were 3 (14%) each. Staph.epidermidis was isolated from 2 (9%) samples. Among the various antimicrobial agents tested, Amikacin showed high level of susceptibility (71%) and Ampicillin showed high level of resistance (100%). Nitrofurantoin showed 62% susceptibility followed by Norfloxacin (47%), Ciprofloxacin (43%) and Gentamycin (38%). Nalidixic acid showed 62% resistance. All the strains were tested for ESBL production phenotypically. Total of 11 strains showed (52.4%) ESBL production and 10 strains (47.6%) were negative for ESBL production in vitro test. Among the various strains, E.coli was the predominant ESBL producer in which 6 strains (total=9) showed positive for ESBL production.

## Conclusions

E.coli is the major causative agent for UTI. Most of the uropathogens have developed resistance to the basic antimicrobial agents. Amikacin remains the effective agent for treating UTI followed by Nitrofurantoin and Quinolones.

## Key Words

UTI, ESBL, disc diffusion method, Mueller Hinton agar.

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## Introduction

Type 2 diabetes mellitus is a metabolic disorder characterized by high blood glucose in the context of insulin resistance and relative insulin deficiency. Type 2 diabetes, is not only associated with carbohydrate metabolic disturbances, concurrently with dyslipidaemia comprising of multiple lipoprotein disorders. Apolipoprotein A-1 (ApoA1) and apolipoprotein B (ApoB) are the main structural proteins of the circulating HDL particles and atherogenic lipoproteins, respectively. Apo B identifies high-risk dyslipidaemic phenotypes that are not detected by standard lipid profile in type 2 diabetic patients. Hence this study of ApoB levels in type 2 DM patients and its relation with lipid profile is undertaken with the following objectives: 1.To estimate serum total cholesterol, triglycerides, HDL cholesterol, LDL cholesterol and ApoB levels in type 2 DM and comparing them with controls. 2.To correlate the Apo B levels with total cholesterol, triglycerides, HDL cholesterol and LDL cholesterol in cases of type 2 diabetes and controls.

## Materials and Methods

Outpatients of R.L.Jalappa Hospital, Kolar between ages of 40 and 65 years were included in the study. Group A comprised of proven cases of Type 2 diabetes mellitus; Group B comprised of type 2 DM patients with optimum glycemic control, as shown by glycated hemoglobin levels. Group C comprised of healthy controls. Sample size: 45 subjects in each group. Analysis: Total Cholesterol, Triglycerides, HDL-Cholesterol and Apo B. Calculation of LDL. Correlation of ApoB with cholesterol, triglycerides, HDL and LDL levels was done using Pearson's coefficient.

## Results

Comparison of mean values of Apo B showed significance in Group A Vs Group B and Group B Vs Group C (p < 0.05). Positive correlation was observed between Apo B with lipid profile in reference to total Cholesterol and LDL (Group A and C) and with total cholesterol, triglycerides and LDL (Group B).

## Conclusions

Apo B measurement reflects lipid metabolism pattern in controlled and uncontrolled diabetes mellitus.

## Key Words

Apo B, Dyslipidemia,type2DM,lipid profile

**Apolipoprotein B Levels and Its Relation to Lipid Profile in Type 2 Diabetes Mellitus**

## Effect of Music on Heart rate, Blood Pressure and Heart Rate Variability

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### Introduction

Music is known to be therapeutic in nature and has been used to treat anxiety, depression, panic, schizophrenia etc. This study deals with the effect of pitch, volume and tempo of music on HR (Heart Rate), BP (Blood pressure) and HRV (Heart Rate Variability) in normal subjects..

### Materials and Methods

The study was conducted on 35 subjects of 17-32 years of age with normal BMI. All subjects were exposed to eight conditions of music – different in pitch, volume and tempo, changing one parameter at time. All subjects had their heart rate, systolic and diastolic blood pressure recorded. ECG was analyzed and the HR, LF/HF, LF % and HF % determined. The differences before and after were compared with and paired-t test.

### Results

Music reduced the systolic, but not the diastolic blood pressure: Low Pitch >Medium pitch = High Pitch.  All volumes had equal effect of Low tempo > Medium tempo = High tempo. Music reduced heart rate: Low pitch music > medium pitch = high pitch music.  Low Volume > medium volume = high volume.  Effect of music on LF/HF ratio Pitch and volume had no effect. Medium and low tempo had no effect. High tempo music increased LF/HF ratio.

### Conclusions

Music helps in reducing systolic blood pressure and lowers heat rate.

### Key Words

Music,bloodpressure,HR,HRV

## Qualitative Exploration of the Perceptions and Practices of Women Related to Tuberculosis Diagnosis and Treatment Facilities in Rural Pondicherry

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### Introduction

Early diagnosis and initiation of appropriate treatment is the mainstay in the prevention and control of Tuberculosis. Public health education is one of the agenda for operational research under Revised National Tuberculosis Control Program (RNTCP). I did this study to explore the perceptions and practices among women regarding tuberculosis diagnosis and treatment facilities in rural Pondicherry and to develop the locally relevant health education material based on FGD data..

### Materials and Methods

This study was undertaken at Kalitheerthalkuppam village (population of 5000) . Focus Group Discussion (FGD) were undertaken in the four different wards of feasibly selected village, with the purposively selected group of women (6-8 participants) in reproductive age group who were willing to participate and belong to different socioeconomic strata. The number of FGDs with women was decided by the saturation point i.e. where it stopped yielding any new information. FGDs were audio recorded, transcribed and analyzed. The manual content analysis of FGD data was undertaken to explore the common themes related to traditional practices, health care seeking and the various reasons for the delay in health care seeking. The information obtained was used for the development of locally relevant need based health education material in the form of flip book for health education of community members. Program for Appropriate Technology for Health (PATH) guidelines was used for development of health education material.

### Results

The FGD data was transcribed in English, manually coded and analyzed. The content analysis was manually done. The three broad categories that emerged from FGD data are mentioned in the table.1.The broad categories were awareness, practices and treatment. We could explore from the respondents the how people get infected with TB: from water, saliva, infected air or infected family members. We also came to know how Government hospitals or allopathic doctors treated TB patients. Native treatment was never considered a treatment option. Tuberculosis was perceived as a disease that can be cured completely by medication.

### Conclusions

This FGD data can be used to develop health education material in the form of a flip book which could be used to give health education to the community.

### Key Words

RNTCP,FGD,Treatment facilities for Tuberculosis, Perception of women

## Profile of Bronchial Asthma in Children
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## Introduction

Asthma is a chronic inflammatory disorder. An increased prevalence and severity of asthma has been reported worldwide in children. There are wide variations in the presence of different risk factors responsible for development of asthma. Scanty information on this aspect of asthma from rural India prompted us to carry out the present study. The objective of the project is to study the various risk factors associated with the development of bronchial asthma in children of 5-15 years of age and to determine which environmental exposure pose the greatest risk for its development..

## Materials and Methods

75 consecutive children between 5-15 years of age coming to the paediatrics OPD of our hospital with mild and severe asthma were studied. After obtaining an informed consent from the parents a detailed history with relevant symptomatology and information to elicit the association of various risk factors for asthma was recorded in a predesigned proforma. The details of various risk factors and its association with the occurrence and severity of bronchial asthma in the patient was statistically compared and analysed using Epi-info3.4.3 software package. The strength of associated risk factors will be tested using chi-square test.

## Results

In the studied population of 75 children, 66.6% were boys and 33.3% were girls. 60% of children belonged to age group 5-9 years, 24% to 9-12 years, 16% to 12-15 years of age.57.3% children had onset of wheeze before 2 years of age. 64% of children had family history of asthma, 56% were exposed to passive smoking and 52% to smoke producing fuel. Overcrowding was seen in 53% of houses and 44% houses lacked proper ventilation and separate kitchen.52% lived in kutcha houses which commonly have moisture, moulds and pests. 45% use mosquito coils and 40% had pets in their homes. Among 75 children, 20% were preterm babies, 25% were not exclusively breast fed for 6 months, 50% were bottle fed and 68% had worm infestation. Preventive therapy in terms of Rotahaler or MDI was used only in 30% of the cases.

## Conclusions

This study suggests that rural children are at risk of exposure to a number of perinatal and environmental factors which may be responsible for the increasing rates of asthma in this population. Environmental modification and usage of preventive therapy may definitely bring down the frequency and severity of asthma in these children.

## Key Words

risk factors, bronchial asthma, puducherry, smvmch, children of 5-15 years.

## Epidemiology of Renal Stone Disease among Adults in A Peri-Urban Locality of Pondicherry
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## Introduction

A renal calculus is a hard mass developed from crystals that separate from the urine and build upon the inner surfaces of the kidney. In India, although few studies offer some information on techniques used in detection and treatment of renal calculi, the information regarding its prevalence in community settings and its distribution across various socio-demographic factors is lacking..

## Materials and Methods

The community based cross sectional study was undertaken in the two wards which come under the field practice area of our institute. The investigator visited and after obtaining the informed written consent from the housewife, administered the pre-designed questionnaire. The questionnaire has been developed based on the existing literature. Apart from background information, the respondents were asked about the presence of symptoms of renal stone in lifetime, status of its diagnosis, duration and sources of treatment among all members above 18 years in the family. The term prevalence of renal stone refers to proportion of persons in the population who has one or more clinically confirmed episodes of renal stone.

## Results

Out of a total of 483 respondents, 31 individuals have been diagnosed with renal stone. Out of total male population of 247(51.1%), 22 were suffering from renal stones. As for females, 9 individuals were diagnosed to have renal stones out of 236(48.9%) in the study population.17 (3.7%) of the normal population of the study group suffered from at least 2 symptoms who are to be evaluated prognostically for developing renal stones in the future

## Conclusions

About 6% of the study population, mostly men, is suffering from renal stone disease. Family history of renal stone and diet did not show a statistically association with renal stones.

## Key Words

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## Hair Dye Poisoning-An Emerging Problem in South India: A Retrospective Study of Cases, Conducted In Svrrggh, Tirupathi.

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## Introduction

Hair dye (Super vasmol) is a cheap and easily available, potentially toxic suicidal poison with no antidote. Though it is rare in western countries, it is common in Eastern Africa, Middle east countries and India, more so in Rayalseema region, Andhra Pradesh, India. It presents with cervico facial edema, acute renal failure and severe rhabdomyolysis..

## Materials and Methods

A retrospective study was conducted over 1 year (march 2011-march 2012) of 40 consecutive patients with Super-Vasmol poisoning admitted in Emergency department,SVRRGGH tertiary hospital in Tirupati, Andhra Pradesh. A chart review including records of clinical presentations, complications, laboratory findings, treatment and outcome details of patients was carried out.

## Results

Total number of patients studied-40 outcome: Discharged with no complications. Referred to dialysis, Expired, Results yet to be analysed.

## Conclusions

It is imperative to raise public awareness of the potential toxicity of the dye. The relatively slow progression of toxic manifestations suggests that early referral and aggressive management could reduce the mortality associated with hair dye poisoning, emphasizing the role of a physician.

## Key Words

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## Phenotypic Differentiation of BORSA from MRSA: Comparison of Susceptibility testing methods and MRSA Latex Agglutination Test

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## Introduction

Staphylococcus aureus is a common cause of nosocomial or community-based infection, often resistant to β-lactam antibiotics due to production of ß-lactamase and presence of mecA gene. Most laboratories use disk diffusion method and MIC for detection of methicillin resistance in S. aureus. The latex agglutination test is an alternative to PCR for rapid detection of mecA gene. We did this study to differentiate BORSA (Borderline Oxacillin Resistant Staphylococcus aureus) from MRSA (Methicillin Resistant Staphylococcus aureus) and to compare MRSA latex agglutination test with standard susceptibility testing methods..

## Materials and Methods

Clinical samples were processed over two months at Tirunelveli Medical College Hospital by following the standard protocols. Resistant strains of S. aureus were subjected to the following phenotypic methods to screen and confirm MRSA viz., Oxacillin screen agar and Cefoxitin disc diffusion test and also were tested for detection and differentiation of BORSA from MRSA by Minimum inhibitory concentration (MIC) of Oxacillin by Broth Macrodilution method.PBP 2a encoded mecA gene was detected by rapid MRSA Latex Agglutination Test (Slidex MRSA Detection kit,Biomeriux,France)

## Results

Nineteen strains were classified as borderline according to oxacillin MIC, resistant by oxacillin disk and sensitive to Cefoxitin and 33 strains were classified as MRSA resistant by oxacillin and Cefoxitin disk methods. Three strains that were classified as resistant by the oxacillin disk and Broth macrodilution methods were also resistant by the oxacillin agar screening agar whereas sixteen strains were susceptible. The sensitivity and specificity of the oxacillin agar screen test were 81% and 84 %, respectively. MRSA-Screen detects the PBP2a antigen in all 33 MRSA strains and all 19 BORSA strains were mecA negative. The sensitivity, specificity, PPV and NPV were 100%.The MRSA latex agglutination test also correlated with the cefoxitin disc diffusion test and the oxacillin MIC for detection of MRSA.

## Conclusions

Compared to PCR, the reference standard, the MRSA-Screen latex agglutination test can rapidly and accurately detect oxacillin resistance mediated by the mecA gene

## Key Words

Borderline Oxacillin Resistant Staphylococcus aureus (BORSA), Methicillin Resistant Staphylococcus aureus (MRSA), Oxacillin agar screen, Cefoxitin disc diffusion test, MIC, MRSA Latex Agglutination Test

## Evaluation of cleaning methods to reduce microbiological contamination of Ultrasound Probes

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## Introduction

Nosocomial infections account for significant morbidity and mortality in hospitals. Ultrasound equipment can spread nosocomial infections. It is important to protect patients from acquiring nosocomial infection when they undergo ultrasonography. We did this study to assess the microbiological contamination of the ultrasound probes and to suggest effective decontamination guidelines for the ultrasound probes..

## Materials and Methods

Two ultrasound machines were sampled over a period of two months at the Department of Radiology at Tirunelveli Medical College Hospital. The swabs were taken from unclean probe of each machine after each scanning procedure and were processed in the Microbiology department. The above procedure was repeated after single and double paper wipe cleaning of the probe. The isolates were identified using standard techniques and antibiotic susceptibility testing was carried out as per CLSI guidelines. The potential for the ultrasound coupling gel to serve as a culture medium for bacterial growth was also investigated.

## Results

Out of 50 swabs, 36 (72%) were culture positive and 14 (28%) were bacteriologically sterile. A total of 37 bacterial isolates were recovered from the 36 culture positive patients. Klebsiella species (93.75%) constitutes the predominant isolate followed by Acinetobacter species (6.25%).The average CFU transmitted by the unclean probes was 74.56, for the probes cleaned by single paper wipe was 6.71 and for the probes cleaned by double paper wipe was 0.76. Probes wiped clean with single and double

paper were likely to test positive compared to probes that were not cleaned. The ultrasound coupling gel was also a source of bacterial growth.

## Conclusions

The results of our study indicate that our minimal standard of probe decontamination consists of wiping the probe with soft paper after each procedure until it is visibly clean.

## Key Words

Nosocomial infections, Ultrasound Probes, Ultrasound Coupling Gel, Decontamination

## Pulmonary Function in Type II Diabetes Mellitus Patients

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## Introduction

There is a limited data to know how diabetes mellitus, type 2 affects lung function. I undertook a study to assess the association between pulmonary function test and glycemic control..

## Materials and Methods

We enrolled 50 patients with type 2 diabetes mellitus and did pulmonary function tests (PFT) in all. We collected data on age, duration of diabetes, glycemic control, and serum cholesterol levels and assessed their association with pulmonary function.

## Results

Out of 50 patients 68 %( 34) patients had normal PFT. Mild obstruction10.0%(5), Mild restriction10%(5) moderate obstruction 4%(2), moderate restriction 2%(1), mixed 6%(3)were noted. A third of patients had abnormal PFTs, and another third had low PEFR. There was a significant correlation between age of the patients and PFT abnormality ($p<0.009$). Though there was no statistical significance between duration of DM and PFT, glycemic control and PFT, there was a borderline co-relation between s. cholesterol levels and PFT ($p<0.061$).

## Conclusions

The present study shows that there is a correlation between Pulmonary functions and type 2 DM in Indian patients. Pathologically it may be attributed to microangiopathic complications or insulin resistance. Further studies on large scale are required to be performed in India.

## To Evaluate the Prevalence of Metabolic Alterations in HIV Infected Patients Receiving HAART.

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### Introduction
All antiretroviral drugs can have both short-term and long-term adverse effects .This study was done to evaluate the prevalence of metabolic alterations in patients receiving HAART..

### Materials and Methods
The study was conducted in the antiretroviral clinic in tertiary centre in mid-2011.One hundred HIV+ ve patients receiving HAART and who consented were selected for the study. Demographic data and treatment history was collected. Metabolic parameters like blood sugar, cholesterol and triglycerides were measured and compared with the HAART regimen prescribed.

### Results
The number of patients receiving 4 different combinations were as under: SLE – 13 (stavudine, lamivudine, efavirenz); SLN-43 (stavudine, lamivudine, nevirapine),: ALN-35 (azidothymidine, lamivudine, nevirapine) and ALE-9 (azidothymidine, lamivudine, efavirenz.) All the patients had normal blood glucose and S. cholesterol levels whereas we found hypertriglyceridemia in 39 patients. The mean(S.D.) S. triglyceride level was 179.28 (143.41). The prevalence of hypertriglyceridemia in different HAART combinations was SLN – 58.14%, ALN-31.42%, SLE-23.07%, ALE-0%. The mean (S.D) S. TG in patients receiving SLN regimen was 224.16( 177.52) which was the highest among all 4 HAART regimens.

### Conclusions
Hypertriglyceridemia is common patient receiving HAART. Patients receiving SLN (stavudine,lamivudine, nevaripine) are more likely to have abnormal lipid levels.

### Key Words
HIV, HAART, dyslipidemia,  prevalence

## Oxidative Stress and Lipid Profile in Young Adult Passive Smokers

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### Introduction
Passive smoking is equally or more hazardous than active smoking due to the exposure to side-stream smoke which contains more toxins than the main stream smoke does. Passive smoking is responsible for 1% deaths around the world and 10% of passive smokers reside in India. Due to direct and indirect stimulation of sympathetic system it leads to dyslipidemia or affects heart directly. The different chemicals present in side-stream of smoke are either oxidants themselves or may lead to generation of free radicals that ultimately gives rise to cardiovascular disorders. We did a case-control study on healthy passive smokers to assess their lipid levels and measure cardiovascular risk..

### Materials and Methods
50 passive smokers and 50 controls not at all exposed to smoke, all healthy, in the age group of 16-25 years were chosen and their lipid profile and oxidative stress marker MDA (Malondialdehyde) were assayed to see the correlation between passive smoking and cardiovascular disorders.

### Results
In passive smokers total cholesterol and MDA were statistically significantly high (p< 0.001). MDA was found statistically significantly correlated to different lipoprotein sub-fractions such as TC (r=0.33; p< 0.001), LDL-C (r=0.36; p< 0.001), Non- HDL-C (r= 0.32; p<0.001) and TC: HDL-C (r=0.24; p<0.01). Also MDA was found to be positively correlated to systolic and diastolic blood pressure and respiratory rate (p< 0.01) which was statistically significant. Passive smoking was found to be strongly associated with hypercholesterolaemia (OR= 17.2; p < 0.001) and oxidative stress (OR= 38.5; p < 0.001).Duration of exposure too was found to be moderately significantly influencing oxidative stress (OR = 3.27; p < 0.07).

### Conclusions
Passive smoking leads to oxidative stress and dyslipidemia that increase risk of coronary artery disease.

### Key Words
Passive smoking, oxidative stress, dyslipidaemia, cardiovascular risk

# Hepatic Enzymes and Insulin Resistance among Smokers for Assessing the Risk of Type 2 Diabetes Mellitus

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## Introduction

Smoking has been associated with 20-40% of increased risk of DM. Nicotine induces insulin resistance (IR) following direct infusion in humans. Hepatic inflammation-assessed with Gamma Glutamyl Transferase (GGT) and Alanine Transaminases (ALT) - is a marker of hepatic insulin resistance. We did this study to assess the association of smoking with insulin resistance and association of smoking with hepatic enzymes..

## Materials and Methods

A case–control study in 57 male Non-diabetic smokers and 40 non-smokers. Estimation of fasting plasma Insulin was done by ELISA and insulin resistance was calculated by HOMA-IR formulae, Fasting plasma glucose and liver function tests were done. Statistical analysis was done with SPSS 7.3 version.

## Results

Mean GGT (41±14.3 IU/l) and HOMA-IR (7.5±3.5) were increased with number of cigarettes smoked/day (>20cig/day) and duration of smoking (>10years). The mean fasting Insulin (29.73 ± 10.72 µ IU/ml) and HOMA-IR (6.47 ± 3.14) were increased in the smokers with p<0.001 although the mean fasting glucose (86.3 ± 20.2 mg/dl) were within the normal limits. The BMI showed negative correlation (r=-0.234, p<0.02) in smokers. Multiple regression analysis showed that among all hepatic enzymes only GGT levels (p<0.01) were significantly correlated with duration of smoking.

## Conclusions

Smokers have increased insulin resistance and a higher normal GGT. A positive correlation is established between these two parameters. An elevated baseline serum GGT may be considered as a marker for increased insulin resistance and Diabetic risk.

## Key Words

DM-Diabetes Mellitus,GGT-Gamma Glutamyl Transferase,ELISA-Enzyme Linked Immuno Sorbent Assay,HOMA-IR -Homeostasis Model Assessment Insulin Resistance,ALT-Alanine Transaminase.

# A COMPARATIVE STUDY OF VARIOUS COMPLICATIONS RESPONSIBLE FOR DEATH IN TRACHEOSTOMY PATIENTS

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## Introduction

Tracheostomy is a life saving emergency procedure known to have saved lifes for many years. As of now tracheostomy is the standard procedure for patients with respiratory obstruction,respiratory insufficiency and retained respiratory secretions. Since the advantages of tracheostomy outweigh the disadvantages,tracheostomy is the gold standard however off late various dreadful complications are coming to light such as Ca Larynx, hemorrhage, tracheo-esophageal fistula etc..

## Materials and Methods

100 tracheostomy pts were included in the study. Out of which 94 males and 6 females of age groups >60 years &<60years with other parameters remaining the same. Patients with more than one complication were excluded from the study. Case papers and medical death reports were assessed over the last 10 years.

## Results

100 PATIENTS were assessed and found out that 70% were due to blockage of the tracheostomy tube,13% of the cases were due to infections,9% of the cases were due to bleeding, 6% of the cases were due to Ca Larynx, & in 2% of the cases the cause was unknown or idiopathic.However this research project has brought to our notice that that the incidence of deaths due to Ca Larynx is on the arise which was not so 10 years ago.

## Conclusions

As we know incidence of deaths due to tracheostomy is on the rise due to several factors.The common complication that causes dealth in tracheostomy patients is blockage of tracheostomy tubes,however in the recent years rare complications such as Ca Larynx are gaining much importance.Ca Larynx is a common complication seen in patients with metallic tracheostomy tubes.Hence from my study we conclude that both common and rare complications can be prevented by proper selection of tracheostomy tubes & proper cannulation and decannulation.

## Key Words

Tracheostomy,blockage of tracheostomy tube,Ca Larynx

# Bio enhancing Effect of Metal Nano Particles Using an Herbal Formulation

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## Introduction

Using nanotechnology, quicker and much cheaper treatments can be developed. By performing further research on this technology, cures can be found for diseases that have no cure today. Therefore nanotechnology can help save the lives of many people. The poly-herbal formulation used in the study is Tinospora cordifolia (200mg), Zingiber officinale (200mg) and Vitex negundo (100mg).This formulation is used in the treatment of arthritis. We are planning to assess its anti-oxidant property with the silver nanoparticles as a bioenhancer for this poly herbal formulation. The objective is to synthesize metal nanoparticles of a poly herbal formulation and evaluate its antioxidant property..

## Materials and Methods

1. Synthesis of metal nanoparticles. 2. Evaluation of anti-oxidant property-DPPH ASSAY. Standard procedure for synthesis of metal nanoparticles were followed Plant leaf extract method The free radical scavenging capacity of the compounds tested, fractions was determined by using DPPH assay. DPPH scavenging activity was measured by the spectrometric method. The percentage inhibition was calculated and expressed as percent scavenging DPPH radical.

## Results

The free radical scavenging property of the poly herbal formulation which is enhanced by silver nanoparticles was measured by DPPH method and it revealed that the concentration 7mcg/ml showed inhibition of 2.24%, 15 mcg/ml showed 4%, 30 mcg/ml showed 8.52%, 60 mcg/ml showed 9.26%, 125 mcg/ml showed 11.72%, 250 mcg/ml showed 22.70% 500 mcg/ml showed 24.87%, 1000 mcg/ml showed 55.29% of inhibition. The maximum percentage of inhibition occurs at 1000 mcg/ml. This drug has good free radical scavenging activity compared to the same drug without silver nanoparticle. And there is dose dependent increase activity against the free radicals.

## Conclusions

The herbal formulation activity is enhanced by the silver nanoparticles.