Letters to the Editor
AMJ 2011, 4, 7

Quality of life assessment in early postmenopausal women in India with and without HRT

Corresponding Author:

Name: Dr. Shikha Gautam
Email: drshikhagautam@yahoo.co.in

Dear Editor,

As the average life span has increased, a greater part of more women's lives will now be lived postmenopausally. The quality of life (QOL) of these women is becoming an important issue. There is a lack of literature on the association of QOL, menopause and hormone replacement therapy (HRT) in the Indian population. This study aimed to investigate whether the menopausal transition results in any change in QOL of postmenopausal women and assesses the affect of HRT on the QOL of postmenopausal women.

The ethical committee of the institution cleared the project. Informed and written consent was obtained from all subjects. The inclusion criteria common to all groups was a lower socio-economic status. The exclusion criteria common to all groups were any acute or chronic illnesses, psychiatric problems or addiction. The subjects were recruited as follows: Group 1 HRT group: Postmenopausal women aged 45 to 55 years who were attending the menopause and HRT clinic of the institute and had been on HRT for the last three months or more in the form of an oral continuous combined regime (conjugated equine estrogen 0.625 mg and medroxyprogesterone acetate 2.5 mg daily); Group 2 Control Postmenopausal group: Postmenopausal women aged 45 to 55 years who were not on HRT were also recruited from the same clinic; Group 3 Premenopausal group: Premenopausal relatives (of women recruited under Group 1 and Group 2) in age group of 30 to 45 years having regular menstrual cycles and not presently on any hormonal contraceptives. This group was investigated both in the proliferative (Group 3A) and secretory (Group 3B) stage of their menstrual cycle.

QOL was assessed by the World Health Organization's QOL brief questionnaire (WHOQOL – BREF) in Hindi.[1] The subjects were asked to score questions regarding their QOL in the following four domains: physical health, psychological status, social relationships and environment. Each item was ranked on a scale from one to five. Domain scores were calculated by multiplying the average of the scores of all items in the domain by the same factor of four, with a higher score indicating a higher QOL in that domain. Estradiol levels were measured in the HRT group and the postmenopausal group. For the premenopausal women assessment was done in the late proliferative phase and in the mid-secretory phase. Statistical analysis was done using SPSS 13.0 statistical package for Windows using one-way ANOVA followed by a Tukey test using 5% as the level of significance. Thirty-two postmenopausal women on HRT, 36 postmenopausal women and 36 premenopausal women took part in the study. The mean age of Group 1 (HRT group), at 52.53 ± 2.87 years and Group 2 (control postmenopausal group), at 51.03 ± 3.28 years was comparable while Group 3 (premenopausal women) were much younger with a mean age of 33.83 ± 2.44 years. The mean estradiol level of the HRT group was 43.11 ± 2.24 pg/ml and of the control postmenopausal group was 19.09 ± 2.71 pg/ml.

Values of physical, psychological and social domain scores of QOL were significantly less in Group 2 (control

postmenopausal group), compared to Group 3A and Group 3B (proliferative and secretory phase of menstrual cycle) (Table 1). The lower scores of QOL in the postmenopausal women are in agreement with previous researchers and can be attributed to increased age and decreased sex hormones in postmenopausal women.[2]

Table 1: WHOQOL-BREF (scores) of Group 3A (Premenopausal women in proliferative phase), Group 3B (Premenopausal women in secretory phase) and Group 2 (Control Postmenopausal women)

Domain	Group 3A Mean±SD	Group 3B Mean ± SD	Group 2 Mean±SD
Physical	14.58 ± 1.03	14.59 ± 1.2	13.37 ± 2.14
Psychological	15.36 ± 1.78	15.85±1.92	13.5 ± 2.08
Social	16.31 ± 2.15	16.8 ± 2.26	14.06 ± 3.42
Environment	15.43 ± 1.51	16.07±1.88	15.14 ± 2.28
	Tukey test : P -value		
Domain	Group 3A & 2		Group 3B & 2
Physical	0.018*		0.017*
Psychological	0.002*		< 0.001*
Social	0.004*		< 0.001*
Environment	0.932		0.228

Table 2: WHOQOL-BREF (scores) of Group 2 (Control Postmenopausal women) and Group 1 (HRT group)

Domain	Group 2 Mean ± SD	Group 1 Mean ±SD	Tukey test: p-value
Physical	13.37 ± 2.14	15.01 ± 1.67	< 0.001*
Psychological	13.5 ±2.08	15.47 ± 1.95	< 0.001*
Social	14.06 ± 3.42	16.18 ± 2.03	0.008*
Environment	15.14 ± 2.28	16.28 ± 1.71	0.09

Ozkan et al. have also used the WHOQOL-BREF to assess the QOL of premenopausal and postmenopausal women. However, they reported no significant difference in pre and postmenopausal women.[3] The values of physical, psychological and social domain scores were significantly less in Group 2 (control postmenopausal group) compared to Group 1 (HRT group) (Table 2). Values of physical, psychological, social and environment domain scores were comparable in Group 1 (HRT group) and Group 3 (premenopausal women) (Table 3). This suggests that HRT has a positive role on the QOL of postmenopausal women.

Table 3: WHOQOL-BREF (scores) of Group 3A (Premenopausal women in proliferative phase), Group 3B (Premenopausal women in secretory phase) and Group 1 (HRT Group)

Domain	Group 3A Mean±SD	Group 3B Mean ± SD	Group 1 Mean±SD
Physical	14.58 ± 1.03	14.59 ± 1.2	15.01 ± 1.67
Psycholo-gical	15.36 ± 1.78	15.85±1.92	15.47 ± 1.95
Social	16.31 ± 2.15	16.8 ± 2.26	16.18 ± 2.03
Environm-ent	15.43 ± 1.51	16.1±1.88	16.28 ± 1.71
	Tukey test : P -value		
Domain	(Group 3A & 1):		(Group 3B & 1):
Physical	0.71		0.723
Psycholo-gical	0.996		0.874
Social	0.997		0.776
Environm-ent	0.297		0.97

Other researchers have also documented the beneficial effect of HRT on QOL.[4] A limitation of the present study was a short study period due to which the subject count was less and longitudinal follow-up was not possible. Also, estradiol levels could not be done in the premenopausal group due to financial limitations. A follow-up study in a larger population is needed to understand more fully the impact of menopause on the QOL of Indian women and the influence of HRT on it.

Sincerely,

Shikha Gautam[1], Nilima Shankar[2], OP Tandon[2], Neerja Goel[3]

[1]Senior Resident, Department of Physiology, University College of Medical Sciences, Delhi
[2]Professor, Department of Physiology, University College of Medical Sciences, Delhi
[3]Professor, Department of Gynaecology & Obstetrics, University College of Medical Sciences, Delhi

References

1. Skevington SM, Lofty M, O'Connell KA. The World Health Organization's WHOQOL – BREF quality of life assessment: psychometric properties and results of the international field trial. A report from WHOQOL group. Qual Life Res. 2004;13(2):299-310.
2. Kumari M, Stafford M, Marmot M. The menopausal transition was associated in a prospective study with decreased health functioning in women who report menopausal symptoms. J Clin Epidemiol. 2005;58(7):719-727.
3. Ozkan S, Alatas ES, Zencir M. Women's quality of life in the premenopausal and postmenopausal periods. Qual Life Res. 2005;14(8):1795-1801.
4. Welton AJ, Vickers MR, Kim J, Ford D, Lawton BA, MacLennan AH. Meredith SK, Martin J, Meade TW. Health related quality of life after combined hormone replacement therapy: randomised controlled trial. BMJ 2008 Aug21;337:a1190.

Prevalence and related factors of hypertension among adults in a rural area of Haryana: A community-based study

Corresponding Author:

Dr. Ramesh Verma
Email: dr.rameshverma@yahoo.co.in

Dear Editor,

The challenges of 21st century healthcare services are not only to combat infectious diseases but also to recognise many causes of ill-health that are related to lifestyle, especially in developing countries. Hypertension affects approximately one billion individuals worldwide.[1] The prevalence of hypertension in developing countries is 10%–20% while in rural areas of India, it ranges from 13%–21%.[2] Despite its sizeable impact on morbidity and mortality, hypertension is often called "the silent killer". This study was a community-based cross-sectional study and was carried out during January to December, 2007 in the Jhajjar district of Haryana state. The Community Development Block, Beri of Jhajjar district with a population of 149,604, was purposely selected. Ten anganwadis (an anganwadi caters 1000 population and provide health and other services to this population), were selected by a simple random sampling method from 119 anganwadi centres. A list of all persons in the age group of 20–60 years was obtained from the survey registers of these anganwadis which constituted a sample size of 2,000 individuals.

Two hundred persons from each anganwadi were selected by a simple random sampling method. House-to-house visits were carried out by researchers and selected participants were administered a pre-tested, semi-structured interview schedule. Informed written consent was taken from all participants. To improve the quality of the blood pressure readings, the subjects were instructed not to smoke or ingest caffeine and to take rest for at least 30 minutes prior to blood pressure measurement. The blood pressure measurements were done strictly as per World Health Organization criteria. For measuring weight, a beam balance weighing machine was used. Before taking the weight the instrument was standardised while height was measured with measuring tape. Weight and height were recorded to the nearest 0.5 kg and 0.5 cm, respectively. Nutritional status was assessed by using Quetlet's Body Mass Index (BMI). Criteria for classification of physical activity were used as per Barengo et al.[3] Severity of hypertension was graded using Joint National Committee (JNC) VII guidelines.[4]

A total of 2,000 people were screened for hypertension. The overall prevalence of hypertension was 21% (420/2000) and sex-wise prevalence was higher in males in the study area. The prevalence of hypertension increased significantly with age and the maximum prevalence was revealed in the age group of 50–60 years (29.9%). A very significant correlation was found with occupation i.e. maximum prevalence was found among shopkeepers/businessmen (29.0%). The relationship between the prevalence of hypertension with BMI, exercise was also found to be highly significant. This study

also revealed that the prevalence of hypertension increased with an increase in the amount of salt intake. The International Clinical Epidemiology Network (INCLEN) study revealed that prevalence of hypertension in developing countries ranges from 3% in rural Thailand and 5% in rural China to 22% in the Philippines and 23% in Indonesia.[5]

In the present study, the prevalence of hypertension was higher in male and increases with age while the sex-wise, occupation-wise, BMI and exercise were found to be significant, similar studies also revealed the same finding in India.

The following suggestions may be recommended for the Indian population:

1. Lifestyle measures should be promoted as early as possible in life especially in high-risk groups and in communities as primary prevention. Measures include maintenance of ideal body weight, moderate physical exercise and restriction of extra dietary intake of sodium.
2. A community-based education programme should be devised to emphasise the need for maintaining healthy lifestyles.
3. Public health facilities should be strengthened to achieve beneficial utilisation by the community.
4. Periodic training of all healthcare functionaries should be emphasised to detect and tackle hypertensive problems.

Conclusion

Consequences of hypertension are stealthy, but devastating, eroding the quality of life of individuals and societies. Many risk factors like age, sex, race, family history, exercise, BMI etc. have been keyed out for hypertension. Higher prevalence, is observed with many of the proven risk factors studied and can be tackled using a multidisciplinary approach for promoting healthy lifestyles. The study also highlighted the need for a community-based education programme to emphasise the need for lifestyle modifications and consistency of treatment. This silent epidemic is now encroaching developing nations like India, even hitting their rural aspects as well. The only sustainable approach is to reduce average blood pressure through population-based strategies.

Sincerely

Ramesh Verma[1], Anamika Bisnoi[2], D R Gaur[3], H K Aggarwal[1], Pardeep Khanna[1], Meena[1], Mohan[1], Shankar Prinja[4]

[1]Pt. B D Sharma PGIMS, Rohtak, Haryana

[2]Haryana Civil Medical Services, Haryana

[3]Agroha Medical college, Agroha, Haryana

[4]School of Public Health, PGIMER, Chandigarh

References

1. Chaddha SL, Gopinath N, Ramachandran K, Radhahkrishnan S. Epidemiological study of hypertension in a rural community of Gurgaon dist. Annual of National Academy of Medical Science. 1989;25(2):141-50.

2. Gupta R, Gupta VP, Ahluwalia NS. Educational status. Prevalence of coronary heart diseases and coronary risk factors in an rural population of Rajasthan. BMJ. 1994; 309:1332-6.

3. Barengo NC, Hu G, Lakka TA, Pekkarinen H, Nissinen A, Tuomilehto J. Low physical activity as a predictor for total and cardiovascular disease mortality in middle aged men and women in Finland. Eur Heart J. 2004;25:2204–11.

4. Chobanian AV, Baris GL, Black HR, Cushman WC, Green LA, Izzo JL JR, Jones DW, Materson BJ, Oparil S, Wright JT Jr, Roccella. EJ. The 7th report of Joint National Committee on prevention, detection, evaluation and treatment of high blood pressure: The JNC 7th report, JAMA 2003;289(19):2560-72.

5. INCLEN Multicentre Collaborative Group. Risk factors for cardiovascular disease in the developing world. A multicentre collaborative study in the International Clinical Epidemiology Network. J Clin Epidemiol. 1992; 45:841-7.

Effectiveness of voice therapy for patients with vocal nodules

Corresponding Author:

Dr.Kavinda Chandimal Dayasiri
Email: kavindadayasiri@gmail.com

Dear Editor,

Vocal nodules are a frequently occurring type of voice disorder. Vocal abuse, misuse, and overuse are frequently claimed to be the causes of vocal nodules and their incidence appears to be related to occupation. It is widely believed that the primary aetiologic factor to vocal nodules is trauma to the vocal fold tissues.[1] Clinicians use a variety of therapy approaches to treat vocal nodules. A main goal of the treatment techniques is to reduce muscle tension and hyper-function and optimise vocal behaviour to reduce the trauma to the vocal folds, so that the aerodynamic forces and acoustic properties approach normal values. [1]

In Sri Lanka, around 6,000 patients with dysphonia receive voice therapy annually at the ENT clinic of the National Hospital of Sri Lanka. The authors in this study have assessed the therapeutic outcome of voice therapy techniques for patients with dysphonia.

The study was of interventional design, and included pre- and post-assessments to evaluate the effectiveness of voice therapy. Twenty-five female patients (age range 18–60 years) diagnosed with bilateral vocal nodules of any size, and location were included in the study. Initial assessment was followed with regular reassessments by the speech therapist using a previously validated rating scale to evaluate the dysphonia quality. This study included several voice therapy approaches in a broad aspect through 10 voice therapy sessions over a period of six months. A combination of voice therapy approaches are used together to elicit their effectiveness on voice quality and the vocal fold status. The major approaches used in this study were:

1. Vocal hygiene and voice conservation
2. Direct facilitation
3. Respiration
4. Easy phonation
5. Yawn sigh
6. Relaxation
7. Carryover

Ethical approval for the study was obtained from the ethics review committee of the National Hospital of Sri Lanka.

Of the 25 participants recruited at the pre-assessment stage, 20 patients completed the voice therapy programme and were available for the post-interventional assessment.

All patients were shown to improve in voice quality to a variable extent after voice therapy (mean pre-voice quality 3.25 compared to mean post-voice quality 8.25; $p<0.001$). The average difference between pre- and post-therapy was 5 (SND=3.95, $p<0.01$). The voice therapy had made a significant positive effect to the voice quality of all clients.

Fibre optic laryngoscopy (FOL) or video stroboscopy examinations were conducted to evaluate the vocal fold status of all the patients after completing the 10 sessions of voice therapy. Figure 1 exhibits the vocal fold status for the 20 patients before and after the voice therapy.

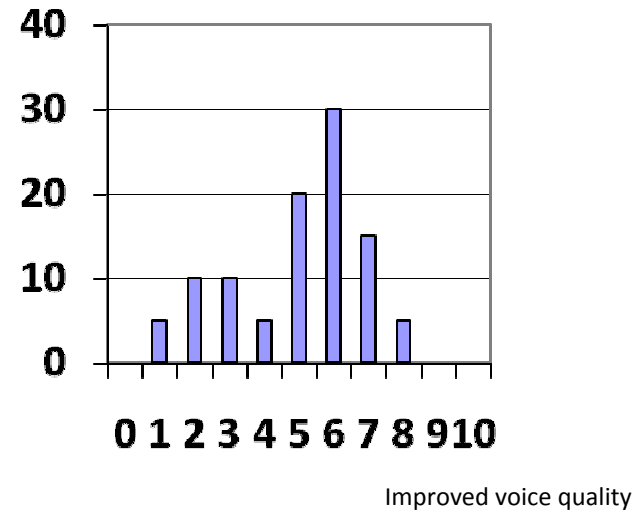

Figure 1: Improved voice quality with patient percentage.

All the patients had bilateral vocal nodules at pre-intervention level and most either disappeared bilaterally (60%) or unilaterally (25%) at the post-intervention stage. Only a minority (15%) was left in their initial state, but without any increase of their initial size (Figure 2).

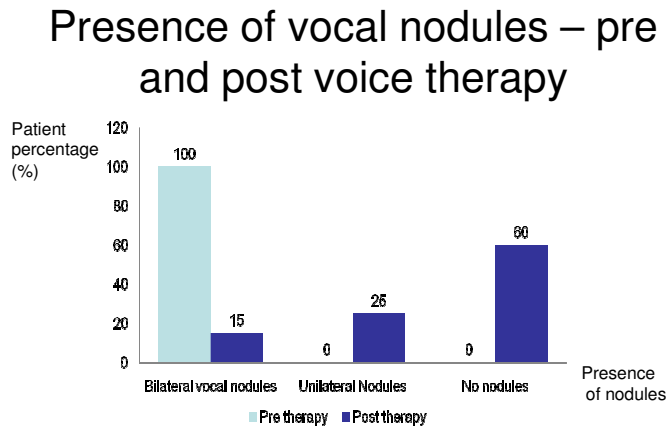

Figure 2: Vocal-fold status before and after voice therapy.

This study result showed that after therapy, the majority of the nodules (85%) had disappeared, and hyper-functional vocal behaviour decreased. The study findings concurred with overseas studies which reported that similar voice therapy for adults significantly reduced, and eliminated vocal-fold nodules and resolved symptoms.[2]

Although voice therapy is effective in improving voice quality and tissue health, it does not necessarily result in complete resolution of pathology. Therefore, it needs to be considered as part of the treatment regimen for patients with vocal nodules. The high agreement among the investigators as well as the significant parameter changes across voice therapy in this study suggests that perceptual evaluations of voice quality can be made reliable and should have a clinical value. The combined results from perceptual and stroboscopic/FOL evaluations of improved voice quality and absence of vocal nodules suggest that voice therapy had a positive effect in voice quality and vocal fold status.

The combination of therapy approaches shows that it is an effective method of treatment for patients with vocal nodules. Therefore, combined therapy can be established as a voice therapy protocol for patients with vocal nodules.

Sincerely,

Sudharshan T[1], Dayasiri MBKC[2], Dayasena RP[3].

[1]Senior Speech Therapist, Department of Otolaryngology, National Hospital of Sri Lanka, Sri Lanka.
[2]Research Officer, Department of Otolaryngology, National Hospital of Sri Lanka, Sri Lanka.
[3]Consultant ENT Surgeon, Department of Otolaryngology, National Hospital of Sri Lanka, Sri Lanka.

References

1. Hillman RE, Hammarberg B, Sodersten M, Doyle P, Holmberg EB. Efficacy of behaviourally based voice therapy protocol for vocal nodules. J Voice. 2001; 15(3):395-412.

2. Cohen SM, Garrett CG. Utility of voice therapy in the management of vocal fold polyps and cysts. Otolaryngol Head Neck Surg. 2007; 136(5):742-6.

Knowledge and practice of contraceptive methods among women of reproductive age in Puducherry, India*

Dr Ganesh Kumar S
Email: sssgan@yahoo.com

Dear Editor,

Increasing population is a worldwide problem today, particularly in developing countries like India. Presently a variety of different methods of contraception are available, which are generally extremely safe compared to the risks associated with pregnancy and childbirth. Lack of knowledge, availability and accessibility of contraceptive methods are the barriers that exist in developing countries like India for their effective utilisation. The National Family Health Survey-3 (NFHS-3) reported the contraceptive prevalence rate as 56%[1], while other studies showed varied prevalence rates. [2-5] However, very few studies had been conducted in India to discover the association of education status with contraceptive use and awareness. Family planning can reduce maternal mortality by reducing the number of pregnancies, number of abortions and the proportion of high-risk births. It also helps to reduce infant mortality, slow the spread of HIV/AIDS, promote gender equality, reduce poverty, and accelerate socioeconomic development. With this background, this study was planned to assess contraceptive use, association of education status with contraceptive use and its awareness among married women of reproductive age in an urban field practice area of JIPMER, Puducherry.

This was a cross-sectional study conducted during October and November 2010. The total population in the urban field practice area of JIPMER is approximately 8,800. There are currently approximately 350 eligible couples in the Kurusikuppam service area which caters for a population of 3,988. The minimum sample size will be 100 by taking the minimum prevalence of use of contraceptive methods as 50% and precision as 10%. The study was conducted by making house-to-house visits and interviewing all the eligible couples aged between 15–45 years in the family using a structured questionnaire. Data regarding contraceptive use, knowledge and factors that includes education and income were compiled and analysed by using a chi-square test.

Table 1: Use of contraceptive methods N=127

Contraceptive Methods	Use (%)
Condom	30 (23.6)
Calendar method	22 (17.3)
Oral contraceptive pills	20 (15.7)
Intrauterine devices	4 (3.1)
Sterilisation	10 (7.9)
Any method	64 (50.4)

A total of 127 subjects were covered. Sixty-two subjects (49%) were aged less than 30 years. The number of couples using any method of contraception was 64 (50.4%). Of these, 30 subjects (46.9%) were using condoms, followed by the calendar method (22, 34.3%), oral contraceptive pills (20, 31.25%), sterilisation (10, 15.6%), and intrauterine contraceptive devices (IUDs) (4, 6.25%) (Table 1). Seventy-one subjects had completed their family with two children or more. Out of these, 58 had two children, 10 had three children and three had four children. Eighty-nine (70%) were aware of the free government supply and service of contraceptive methods. Thirty subjects (23.6%) were aware that use of condoms prevents against other sexually transmitted diseases. Our study discovered that contraceptive use and education status were not associated (Table 2), but awareness regarding contraceptive methods and education status was associated (Table 3).

Table 2: Use of contraceptive methods and education status

Contraceptive Method	Education level (<10th std), N=36	Education level (>10th std), N=28	Total (%), N=64
Condom	10 (27.8)	20 (71.4)	30 (46.9)
Calendar method	8 (22.2)	14 (50.0)	22 (34.4)
Oral contraceptive pills	4 (11.1)	16 (57.1)	20 (31.3)
Intrauterine devices	1 (2.8)	3 (10.7)	4 (6.3)
Sterilisation	4 (11.1)	6 (21.4)	10 (15.6)

χ^2=1.93, P=0.749

The study highlights some issues related to awareness and practice of family planning methods and its association to educational level in an urban set-up of Pondicherry where 81.2% of females were literate (2011 census). It is difficult to generalise the study results with other parts of the country because of the differences in sociocultural and health service characteristics and the methodology adopted. However, it provides valuable information for the society and stakeholders of health authorities regarding the strategies required at an urban area in the country. Our study showed that education is associated with awareness, but not with use of contraceptive methods. The NFHS-3 reported the contraceptive prevalence rate as 56%[1], while other studies showed varied prevalence rates ranging from 33.5% to 72.1%.[2-7] Some studies showed that female sterilisation is the commonest method1[3,5], while other studies reported either the oral contraceptive pill or condom use was the commonest family planning method adopted by the eligible couples[2,6,7]. Varied use of different family planning methods may be due to the factors such as knowledge and acceptance of different methods and felt needs of the couples in different parts of the country.

Table 3: Awareness regarding contraceptive methods and education status

Contraceptive Method	Education level <10th std (%), N=86	Education level >10th std (%), N=41	Total (%), N=127
Condom	60 (69.8)	35 (85.4)	95 (74.8)
Calendar method	10 (11.6)	32 (78.0)	42 (33.1)
Oral contraceptive pills	15 (17.4)	41 (100.0)	56 (44.1)
Intrauterine contraceptive devices	9 (10.5)	29 (70.7)	38 (29.9)
Sterilisation	36 (41.9)	40 (97.6)	76 (59.8)

χ^2=34.5, P=<0.001

The NFHS-3 reported that knowledge about various temporary and permanent methods among women ranged from 45% to 97%, while in the present study knowledge ranged from 30% to 75% about various methods. Although approximately three-quarters of participants (95, 74.8%) aware of condoms, the majority of them were not aware of IUDs (89, 70.1%) and the pill (71, 55.9%). Other studies showed comparatively more awareness than our study.[1,2] The difference in awareness was found to be statistically significant according to educational status. The present study revealed that awareness about contraceptive methods is essential especially among less educated group. Counselling and follow-up services should be strengthened among target groups so that contraceptives are used regularly and effectively for longer periods.

Sincerely

Ganesh Kumar S, Gautam Roy, Hemalata K, Haritha G, Minu J, Ankit D, Arun K

Department of Preventive and Social Medicine, JIPMER, Puducherry-06

References

1. National Family Health Survey-3 [NFHS-3] India, International Institute for Population Sciences [IIPS] [Internet] 2009 [cited 10 January 2011]. Available from: http/www.nfhsindia.org.

2. Nigam A, Maheshwari N, Prakash A. Knowledge of emergency contraception and contraceptive practices: Representative study from rural Uttar Pradesh. Indian J Community Med. 2010; 35: 449-50.

3. Kumar M, Meena J, Sharma S, Poddar A, Dhalliwal V, Modi SC, Singh K. Contraceptive use among low income urban married women in India. J Sex Med. 2011; 8: 376-382.

4. Kansal A, Kandpal SD, Mishra P. Reasons for not practicing contraception in a rural population of Dehradun district. J Commun Dis. 2006; 38: 97-101.

5. Kumar R, Singh MM, Kaur M. Dynamics of contraceptive use in a rural community of Haryana. Indian J Med Sc. 1999; 53:201-11.

6. Ferdousi SK, Jabbar MA, Hoque SR, Karim SR, Mahmood AR, Ara R, Khan NR. Unmet need of family planning among rural women in Bangladesh. J Dhaka Med Coll. 2010; 19(1): 11-15.

7.TuladharH, Marahatta R. Awareness and practice of family Planning methods in women attending Gyne OPD at Nepal Medical College Teaching Hospital. Nepal Med Coll J 2008; 10(3): 184-91.

Why can't Malaysians stop smoking?

Corresponding Author:

Eng Keat Ong
Email: engkeat2004@yahoo.co.uk

Dear Editor,

Smoking is the single largest preventable cause of disease and premature death.[1] About half of all men in Malaysia smoke.[1] Worse, smoking is still on the rise in developing countries.[1] According to the Malaysian National Health and Morbidity survey III 27.0% had smoked, 21.5% were current smokers and 5.4% had quit smoking.[2]

We herein report the findings of a cross-sectional study conducted in a rural village in Penang, Malaysia amongst all consenting smokers who could communicate effectively. The study was approved by the institutional ethics committee. We found that most smokers amongst the 46 persons who participated were aware of the risks of smoking and had attempted to stop, however, without success. This failure was attributed to tobacco addiction. As shown in Table 1, despite being aware of the smoking cessation services offered by the Ministry of Health of Malaysia, only 21% of our subject population had actually made use of the service. Pictorial warnings on cigarette boxes were ignored by most. All of our participants were Muslims and they were aware of a 'fatwa' (a scholarly opinion on matter of Islamic law) against smoking but they felt that smoking is a lesser sin compared to alcohol consumption.

Most of the smokers refused to take responsibility for their health. Even though addiction to tobacco was recognised by our subject population as the main reason for failure to quit, the majority (52%) of them had the opinion that the government should do more to urge people to quit smoking. Some even suggested that only a

ban on the sale of cigarettes would make them stop smoking. Although tempting, realistically this is almost impossible bearing in mind the revenue earned by the government from cigarette taxes, existing political issues and the practicality of the measures. Besides, poor regulation of the 'cancer sticks' might cause more harm than good.

Table 1: Awareness of factors that can help in smoking cessation

Questions	Number of respondents (n=46)	
	Yes f (%)	No f (%)
Are you aware of the health hazards caused by smoking?	45 (98)	1 (2)
Are you aware of any services which help people to stop smoking?	26 (57)	20 (43)
Do you think the Ministry of Health of Malaysia has put in adequate effort in promoting smoking cessation?	16 (35)	30 (65)
Are you aware of the religious point of view towards smoking?	37 (80)	9 (20)

In summary the risk factors, gruesome pictorials and religion have no effect on getting smokers to quit. Addiction to tobacco is an important issue to be addressed if the quit smoking campaigns are to be successful. It is also imperative to promote smoking cessation services and to convince people to use the available services. As revealed in this study, many smokers refused to take responsibility for their health, therefore counselling services using the behavioural change model which applies the self determination theory (SDT) can be used. This model has been proven to be successful.[3] The model in that study could be used as a basis for better interventional programmes for smoking cessation. If the individuals manage to quit smoking on their own, a sense of accomplishment and empowerment will be felt and the effect would be more durable if not forever.

Due to financial and time constraints, the sample size in this study is small. However, the results are pertinent. The issue that smokers are reluctant to take responsibility for their own health should be addressed and we hope that our letter would spur others to conduct bigger and more in-depth studies on this matter.

Sincerely,

Eng Keat Ong[1], Eleanor Shu Yi Wong[1], Abdul Rashid Khan[2]

[1]Medical Student, Penang Medical College
[2]Associate Professor, Department of Public Health Medicine, Penang Medical College

References

1. World Health Organization [Internet]. 2005. Fact sheets. Smoking statistics. Regional office for the Western Pacific. [Updated 28 May 2002, cited 3 April 2011] Available online: http://www.wpro.who.int/media_centre/fact_sheets/fs_20020528.htm.

2. National Health and Morbidity Survey III. [Internet]. 2006. MyGovernment, the Malaysian Governments official portal. [cited 30 June 2009] Available online: http://www.nih.gov.my/NHMS/index.html.

3. Williams GC, McGregor HA, Sharp D. Testing a self-determination theory intervention for motivating tobacco cessation: Supporting autonomy and competence in a clinical trial. Health Psychol [Internet]. 2006 [cited Mar 28 2011]; 25(1): 91-101 :. Available from: http://www.psych.rochester.edu/SDT/documents/2006_WilliamsMcGregoretal_TestingSDTTobaccoCessation.pdf

Paradoxical pressor response with angiotensin-converting enzyme inhibitor and angiotensin receptor blocker

Dr. Prabha Adhikari M
Email: adhikari_pmr@yahoo.com

Dear Editor,

Angiotensin converting enzyme inhibitors (ACEI) and angiotensin receptor blockers (ARB) comprise the initial choice of drugs for the treatment of hypertension (HTN).[1] ACEI tend to be less effective at lowering blood pressure (BP) in African Americans.[2] We describe two cases of essential HTN developing paradoxical HTN as an adverse effect to ACEI and ARB; reported from a teaching hospital in south India.

Case A: A lady, aged 68 years with a five-year history of HTN. BP was under control with atenolol 50mg and amlodipine 10mg. She developed pedal oedema so amlodipine was replaced with enalapril 10mg (Enam) and four weeks later her BP recording was 180/110 mmHg. She was also diagnosed with heart failure so a combination of frusemide (20mg) and spironolactone (25 mg) was added to the prescription, in spite of which the BP was found to be persistently high. Eight weeks later, the patient complained of dry cough, hence, enalapril was stopped and BP was normalised after four weeks. BP dropped further down necessitating a reduction in the dose of diuretic combination.

Case B: Male, aged 54 years, with a 10-year history of HTN was effectively treated with metoprolol 50mg SR and indapamide 2.5 mg. On a later date, subsequent to the diagnoses of classical angina and pre diabetes, indapamide was stopped and losartan 25mg was added. Four weeks later, BP was recorded as 180/110mmHg which further rose to 190/120 mmHg. BP was persistently high for eight weeks even after the addition of indapamide 2.5 mg. So, S(-) amlodipine 2.5mg was added to find a fall only in diastolic BP by 10 mmHg. Losartan was withdrawn (as a suspect drug) after which the BP came down to normal and on a later date, BP lowered further so that indapamide had to be stopped. The patient continued with the remaining two drugs.

Serum creatinine was <1.2 mg/dl and renal arteries (by Doppler sonography) were normal in both cases. BP was recorded as per JNC VII guidelines[1] and a BP reading of 130/80 mmHg was considered normal. The rise in both systolic and diastolic BP was observed by a maximum of 46% and 50%, respectively. The initial rise and the later normalisation of BP followed a reasonable temporal sequence to the administration and cessation of ACEI/ARB, respectively, and these changes were unlikely to be related to the concomitant drugs or underlying/concurrent disease. Hence, we attribute enalapril/losartan as the probable cause of this pressor response. The BP changes were noticed once a month during the routine follow-up visits, hence we can not spell out the exact time gap between the drug administration and the appearance of the adverse event. It is also not known if this pressor response is just an initial event and if the BP would have normalised with the continued use of these drugs. Dose titration was not attempted and both the drugs were used in sub maximal doses (as is routine practice) which could be contended as the basis of a rise in BP. Then again, it should be noted that in presence of the enalapril/losartan, addition of other antihypertensive drugs did not lower the BP and the BP was normalised only when the offending drugs were withdrawn. The suspect drugs were not retested; hence, further substantiation is needed for a definitive causal link.

We conclude that ACEI and ARB though used to treat may paradoxically cause HTN even when there is no evident renal artery stenosis, the underlying mechanism of which is not clear. Polymorphism in the ACE gene, and angiotensin-1 receptor gene have been suspected behind the decreased antihypertensive efficacy of ACEI in African Americans.[2] In mice lacking AT_{1A} & AT_{1B} receptors, enalapril administration caused a significant rise in BP when the BP was significantly lowered in the normal mice.[3] It is possible that such genetic variations might be underlying the paradoxical HTN in current cases. Renal vasculopathy, either nephrosclerotic or atherosclerotic,[4] of a low grade where the glomerular filtration rate is dependent on systemic hypertension and post glomerular vasoconstriction, may also have contributed to the pressor response. We suggest that physicians must consider this adverse effect before opting for dose escalation or addition of antihypertensive drugs when BP

remains uncontrolled with ACEI/ARB and that would help to reduce the unnecessary burden of cost of treatment and drug toxicity to the patient.

Sincerely,

Sabitha P[1], Adhikari Prabha M[2]

[1]Royal College of Medicine Perak, UniKL, Ipoh, Malaysia

[2]Kasturba Medical College, Mangalore, Manipal University, India-575 001

References

1. Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. [Internet] 2004. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Available at: http://www.nhlbi.nih.gov/guidelines/hypertension/jncintro.htm.

2. Johnson JA. Ethnic differences in cardiovascular drug response. Potential contribution of pharmacogenetics. Circulation. 2008;118:1383-93.

3. Oliverio MI, Kim HS, Ito M, Le T, Audoly L, Best CF, Kluckman K, Maeda N, Smithies O, Coffman TM. Reduced growth, abnormal kidney structure, and type 2 (AT_2) angiotensin receptor-mediated blood pressure regulations in mice lacking both AT_{1A} and AT_{1B} receptors for angiotensin II. Proc Natl Acad Sci. 1998; 95:15496-501.

4. Fervenza FC, Textor SC, Rosenthal D. Nephrosclerosis. [Internet] October 20, 2008. Available at: http://emedicine.medscape.com/article/244342-overview.