



Private practitioners approach to the diagnosis of Pulmonary Tuberculosis in Southern India

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RESEARCH

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Abstract

Background

In India majority of patients with respiratory symptoms initially consult private doctor. Few studies have been performed on the role of private practitioners in TB control. The present study was planned to assess the private practitioners approach in the diagnosis of pulmonary tuberculosis.

Method

A Cross Sectional study was conducted between September 2008 and October 2009 in rural and urban area of Udupi taluk. The study population included all modern medicine general practitioners and all the specialists practicing Internal Medicine, Chest Medicine, and Pediatrics. The non response rate was 8%. About 15 practitioners who were not in the list were interviewed during field visits. So, the total number of practitioners interviewed was 116.

Results

The majority (67.4%) of general practitioners and physicians opted for sputum examination as the investigation of choice to diagnose pulmonary Tuberculosis. About 26.1% of general practitioners and physicians used both sputum and chest x-ray to diagnose pulmonary tuberculosis. About 6.5% used chest x-ray alone. However, about 58.3% of paediatricians preferred both sputum and chest x-ray to diagnose pulmonary tuberculosis.

Conclusion

Relying only on chest x-ray to diagnose pulmonary tuberculosis may lead to over-diagnosis, over-medication and un-necessary utilization of resources. There is a need to improve the awareness among private practitioners regarding the importance of sputum smear examination to diagnose pulmonary tuberculosis.

Key Words

Pulmonary Tuberculosis, Diagnosis, Private practitioner

Background

India accounts for one fifth of the global incidence - an estimated 1.9 million cases occur annually.¹ Today in India Directly Observed Treatment Short course (DOTS) programme against Tuberculosis launched in March 1997 is recognized as the fastest expanding programme covering the whole country by March 2006.² Although the Indian government provides a basic national health service, an increasingly large number of health interactions in India are with the physicians in the private sector. In 1947, the private health sector provided only 5-10% of patient care; in 2002 it accounted for 82% of outpatient visits.³ In 1998, in western India, 88% of rural and 85% of urban patients with TB visited a private practitioner for their initial provider encounter.³ Unfortunately, however, a few studies^{3,4,5,6} concluded that most of the private practitioners surveyed never considered sputum examination as necessary to diagnose pulmonary tuberculosis. Thus, the present study aims to study the tuberculosis diagnostic practices among private practitioners.

Method

A study was conducted in Udupi taluk, South India. Health care services are provided through network of Primary Health Centres (PHCs), Community Health Centres (CHCs), Taluk hospital and District hospital. There are 22 PHCs, 2 CHCs, one district hospital, one Medical college, 31 private hospitals 19 of which are in the rural area of Udupi taluk and 12 in urban area. In the rural area 60% of practitioners



are practicing indigenous forms of medicine. Udupi Taluk has one tuberculosis unit (TU), 8 Designated Microscopy Centers (DMCs) and 138 DOTS centers. A Cross Sectional study was conducted between September 2008 and October 2009 in rural and urban area of Udupi taluk. The study population included all modern medicine general practitioners and all the specialists practicing Internal Medicine, Chest Medicine, and Pediatrics. The total list obtained from the Indian Medical Association Udupi, Taluk Health office Udupi, and Kasturba Medical College, Manipal included 110 practitioners; among them 9 practitioners were considered as non-response due to either not interested in the study or not able to make contact in clinic even after 3 visits. The non response rate was 8%. About 15 practitioners in the same geographic area, who were not in the list were interviewed during field visits. So, the total number of practitioners interviewed was 116.

Pre-tested, semi-structured questionnaire was used to collect the data. Approval of Institutional ethics Committee was obtained.

Data collection methodology:

A) Selection of study participants

The list of all practitioners' addresses and contact details under each Primary Health Centre area was obtained from the Taluk health office, Udupi. The list of all practitioners' addresses and contact details in Udupi town were obtained from Indian Medical Association Udupi. In Kasturba Medical College, the list obtained from hospital section.

B) Interviews:

Initially the investigator visited the clinic of the practitioner. Written informed consent was obtained from practitioners willing to participate after explaining clearly the purpose and method of the study. Information sheet regarding the study was also handed over to each participant. Interview was conducted in the clinic at a time convenient to the doctor. Each interview was lasted for 20 to 30 minutes. The interview schedule included questions regarding basic demographic details and tuberculosis diagnostic practices. If the time was not convenient for the practitioner another convenient time for him was obtained for the interview. If the doctor was not available in the clinic, at least three visits were undertaken before considering the doctor as a non-respondent.

Results

In our study most of the practitioners were in the age group of 21-40 years (46.6%). Majority of practitioners were males (85.3%), while only 14.7% were females. In our study majority 42.2% of practitioners had been practicing for less than 10 years. However about 35% of study participants had more than 20 years of practice. Average duration of years of practice among general practitioners was (mean \pm SD) 27.3

\pm 10.46. Average duration of years of practice among specialists was (mean \pm SD) 11.13 \pm 10.13. About 96.0% practitioners examined 6 to 10 cases of tuberculosis per month as said by practitioners. In our study majority 67.4% of general practitioners and physicians opted for sputum examination as the investigation of choice to diagnose pulmonary Tuberculosis. About 26.1% of general practitioners and physicians used both sputum and chest x-ray to diagnose pulmonary tuberculosis. About 6.5% used chest x-ray alone. However, out of 24 Paediatricians about 58.3% preferred both sputum and chest x-ray to diagnose pulmonary tuberculosis.

Discussion

Our study documents that the majority of the practitioners used sputum examination as the investigation of choice to diagnose pulmonary tuberculosis. In a study by F.Greaves, most practitioners interviewed, 80% used sputum microscopy as a first-line test, but a variety of other tests were also employed, including purified protein derivative, chest radiograph, and a range of blood tests³, however in a study by Javaid Ahmed Khan 96% preferred chest X-Ray, and 48% sputum microscopy.⁴ In a study by T.A.Okeke most practitioners (91.2%) based their diagnosis of tuberculosis on sputum acid-fast bacilli (AFB).⁸ Bacteriology was the preferred method of diagnosis in the study conducted by Shehzadi⁹ and Cirit.¹⁰ However in studies from India by Prasad⁷, Baxi¹¹ almost all doctors (99.8%) used chest X-ray, 50.6% performed sputum microscopy while none used it without chest X-ray. In a study conducted by Y.P.Hong⁵ over 50% did not consider sputum examination essential in case finding/diagnosis. In a study done in Philippines⁶ TB diagnosis was mainly based on X-ray findings (87.9%). A study by Maria Fidelis, for case finding and diagnosis, more than half (55%) answered that they used chest x-ray and sputum examination; 30% used chest x-ray routinely and sputum examination when considered necessary.¹² The study mainly emphasizes that sputum examination should be considered as the investigation of choice to diagnose Pulmonary tuberculosis. There are a number of limitations of this study. As with any participant-reported survey, it is possible to have social desirability bias. It is likely that doctors will answer with a response that they think is correct, rather than what they would do in actual practice. However, these results still show a distinct difference from the WHO recommended guidelines in practitioners approach in diagnosis of pulmonary tuberculosis. Despite these limitations, our survey suggests that there is room for improvement in the quality of diagnosis for TB in the private health sector.



Conclusion

There is a need to improve the awareness among private practitioners regarding the importance of sputum smear examination to diagnose pulmonary tuberculosis. This can be achieved through involvement of professional bodies like IMA (Indian medical association), NIMA (National Integrated Medical Association) and through various public private partnership schemes. There should be involvement of programme officers, medical officers, senior physicians, district health authority, medical colleges and World Health Organization (WHO) consultants in training and motivating private practitioners to emphasise sputum smear examination to diagnose pulmonary tuberculosis.

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CONFLICTS OF INTEREST

The authors have no conflict of interest