

## Challenges faced by general practitioners in Pakistan in management of tuberculosis: a qualitative study

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**Objective:** To determine the challenges General Practitioners (GPs) face in management of patients with Tuberculosis.

**Methodology:** Focus group discussions with 12 GPs.

**Results:** Challenges faced by GPs were mostly due to knowledge gaps. Facilities for gold standard tests like sputum smear and culture were not available at all centers. Extra pulmonary TB posed a big diagnostic challenge because of lack of facilities for organ biopsies. Regarding management, GPs mostly used fixed drug combinations. Most participants did not calculate doses for their patients and none maintained a TB register. They were not aware of screening guidelines for close contacts. Knowledge about

diagnosis of Multi-drug resistant TB (MDR-TB) was lacking. Treating pregnant and lactating women with TB was considered a major challenge. Counseling needs attention because it is linked with drug compliance and social stigmatization.

**Conclusion:** Knowledge gaps regarding diagnosis and management of TB were major problems. Educational seminars should be conducted by experts in the field for GPs regularly to update them about standard treatment practices. Counseling workshops are needed for GPs in this regard. (Rawal Med J 2013;38: 249-252).

**Key words:** General Practitioners, tuberculosis, anti-tuberculosis drugs.

### INTRODUCTION

Pakistan carries 44% of the total tuberculosis (TB) burden in Eastern Mediterranean region and ranks 6th among all countries.<sup>1</sup> Most Pakistani patients with TB visit their general practitioners (GPs) for treatment.<sup>2</sup> Therefore, Pakistani GPs need to be well equipped in terms of knowledge, consultation skills and infrastructure for management of such patients. Studies performed in Pakistan have highlighted the lack of knowledge among our Family Physicians.<sup>3-5</sup> These have been conducted in different parts of the country,<sup>6-8</sup> but the question remains why this is still so? What is needed is an in-depth analysis as to why our GPs' knowledge remains so poor even in this day and age with access to information. What are the barriers that they face? How can educational institutions help GPs to gain access to information or overcome challenges that they face with patients suffering from this disease?

Focus groups are recognized as effective tool in describing peoples' perceptions and used to examine not only what they think but how and why.<sup>11</sup> They have also proven to be effective for gaining

perceptions of Family physicians, especially with regard to TB management.<sup>12</sup> The aim of this study was to determine the challenges GPs face in management of patients with TB in the hope that the study will help in devising measures to deal with poor TB control.

### METHODOLOGY

Two focus group discussions were conducted at Shifa College of Medicine, Islamabad, Pakistan in January 2009 which was attended by 22 GPs on a weekly basis. All GPs were personally approached the institution a week before initiating the study. Twelve of them consented to join the focus group discussions. One of authors (MR) is a consultant pulmonologist and is the main resource person in the institution regarding TB. He conducts sessions on TB for the Professional development course and is a focal person of the National TB control program (NTP) of Pakistan. Ethics approval was obtained from the Institutional Review Board prior to initiating the study and written informed consent was taken from each participant.

The participants were posed with the question "What challenges do you face in managing patients with TB?" The two sessions held on two days lasted for 3 hours each and were audio taped. Audiotape was transcribed verbatim and was evaluated by both the investigators independently and common themes were identified and coded. We developed inductive codes based on knowledge gaps, lack of infrastructure and ethical issues. In the subsequent weeks, our analysis was presented to the participants for feedback. None of the twelve participants raised any issues regarding validity of the data.

## RESULTS

All members of the group were practicing GPs in the twin cities of Rawalpindi and Islamabad. Some were working in the city center and some on the suburban areas. The average duration of years in practice was about 15 years. All were working in the private sector. Their demographics are shown in Table 1.

**Table 1: Demographics of Focus Group.**

- Average age 45 years (range 28-62)
- Average years in General Practice: 15 (range 5-37)
- Gender: 7 males and 5 female
- All except one were graduates of public sector medical colleges
- All ran their own private clinics and some (n=2) were employed elsewhere also
- Catering to both rural and urban populations
- Catering to mostly middle and lower socioeconomic group
- Most (n=11) had solo practices.

The challenges faced in management of TB patients were mostly due to knowledge gaps, lack of infrastructure and ethical issues.

### Knowledge Gaps

These gaps were identified under the following sub-headings.

**Diagnosis:** A lot of emphasis was placed on non-specific tests like Erythrocyte Sedimentation Rate (ESR), Serodiagnostic tests, Immunochromatographic test (ICT-TB), Polymerase Chain Reaction

assay for TB (PCR) and Mantoux test for diagnosis. These tests were being used in adjunct instead of the gold standard test of sputum smear and culture.<sup>13</sup> Most of GPs were not aware of proper collection of sputum and how to counsel a patient to give an appropriate sample. Also, no one was trained to see a slide for Acid Fast Bacilli (AFB). Two GPs reported that as TB was so common among our population they have seen pulmonologists start Antituberculous Therapy (ATT) when patients present with chronic cough and fever and so they also tend to follow this practice.

The issue of empirical treatment of TB using four drugs was highlighted. Empirical therapy using four drugs has been justified in areas with a high prevalence of TB,<sup>14</sup> however it is not recommended in any International guidelines. Almost all our GPs were aware of and had practiced empirical treatment but they were not aware that broad spectrum drugs like Rifampicin and Streptomycin should not be given in empirical therapy.

**Management:** All GPs except those with an interest in pediatrics were prescribing fixed dose combination of four drugs to their adult TB patients. As this is also recommended in the latest WHO guidelines,<sup>15</sup> all of them thought that this helps in compliance. But when asked to reflect on whether it was a scientifically sound process, many of them brought out issues of drug interactions, bioavailability, side effects and toxicity.

Counseling patients regarding treatment of TB was another challenge. In our culture, the concept of "hot" and "cold" medications is quite prevalent. Antituberculous drugs are looked upon as "hot" medications and patients tend to stop taking drugs once their symptoms improve. We asked GPs why they thought so and they brought up the same idea of ATT being "hot" medication.

When asked about Directly Observed Therapy Short Course (DOTS) strategy initiated by the National TB Control Program of Pakistan, no one was completely aware of it. This is perhaps due to the fact that this program has not targeted training of GPs in private practice.

**Screening:** Most of the GPs were not aware of screening guidelines for close contacts of TB patients.

Cost is a big issue in Pakistan where 40% of people lie below the poverty line. Only two GPs stressed on screening but cost issues also hampered them.

**MDR-TB:** They were not fully cognizant of the definition of MDR-TB and labeled those not responding to conventional therapy as MDR-TB.

**Pregnant and lactating women:** Most GPs were stymied when asked about management of TB in a pregnant or lactating woman. They were also not well informed about Isoniazid (INH) prophylaxis for newborns of mothers with open TB.

#### **Lack of Infrastructure**

Another emergent theme was lack of infrastructure and facilities within the health care system of Pakistan. These are classified under the following sub-headings.

**Facilities for tests and biopsies:** The NTP has set up various government run TB centers and TB hospitals within the country. However, non-availability of tests was identified by some GPs as a major challenge for diagnosing TB patients. New and emerging tests like ICT, serology and PCR seemed to have captured the fancy of most of GPs and not enough stress was placed on sputum smear and culture. Diagnosing extra pulmonary TB was also seen as a problem.

**TB register:** None of the GPs maintained a TB register of their patients. We asked them to reflect on why it would be important. The issue of compliance and contact tracing came up in the discussion.

**Complicated cases:** Our GPs saw 15-20 percent of TB patients who also had complications like pleural effusion, intestinal TB and TB meningitis. These were then referred to specialists. There is no structured system for referral in Pakistan and most people pay out of pocket expenditures for their health. These patients may or may not return to their primary GP after referral so it may be quite easy for them to be lost to follow-up.

**Provision of Guidelines:** The WHO guidelines for Management of Tuberculosis are used in South Asian countries. However, the Pakistan Chest Society has published its own guidelines under the name of National TB Guidelines, which are slightly different from WHO. The GPs were using one or the other and somewhat confused as to which guidelines to follow.

#### **Ethical Issues**

There were issues relating to disclosure of diagnosis as tuberculosis is looked upon as a stigmatizing disease. There was a lot of discussion about how to deal with family members of a TB patient especially if it is a girl who is about to be married. Almost all our GPs faced this problem. Lack of education on part of the family and poor consultation skills by the doctor were identified as probable triggers, which aggravated the situation.

#### **DISCUSSION**

There have been numerous quantitative studies conducted in Pakistan about the knowledge of tuberculosis and all of them have been consistent in their results. General practitioners who treat 90% of our patients have little knowledge of TB and competency in this regard is low.<sup>2-8</sup> This study highlights where the deficiencies are and what needs to be done regarding GPs' education in our population. However, this was a small focus group from the twin cities of Islamabad and Rawalpindi and our results may not be generalized for the entire country. However, this study does give us an insight of the challenges faced by our doctors and their possible solutions.

Most of our GPs in the group claimed they learned a lot about Tuberculosis after the session ended. This expressed that they shared their views openly and without any inhibitions. Institutions of learning, and not pharmaceutical representatives, need to take on the challenge of educating not only their students but also those lying beyond their boundary walls.

#### **CONCLUSIONS AND RECOMMENDATIONS**

Tertiary care centers need to take on responsibilities of the populations that they cater for and this could best be done by education of GPs in the surrounding areas. Recommendations for screening, diagnosis and management of TB need to be highlighted not only at the postgraduate level but also in undergraduate medical schools. Multi-drug resistant TB should also be stressed upon as we may be seeing a rise of such cases in the near future. Tuberculosis in special patients like pregnant and lactating females also needs to be focused upon

while educating our doctors.

Regarding infrastructure, we came to the conclusion that the government run TB centers could work more efficiently if practicing physicians in the surrounding areas are also taken into confidence. They could provide them with diagnostic facilities and training of technicians. They could also be involved in maintenance of TB registers, which would benefit the community. This public-private partnership could go a long way in battling against Tuberculosis, which is ravaging the country at present.

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**REFERENCES**

1. World Health Organization. Country profile: Pakistan, Global Tuberculosis control. WHO Report 2003, pp. 99-101.
2. Marsh D, Hashim R, Hassany F, Hussain N, Iqbal Z, Irfanullah A, et al. Front-line management of pulmonary tuberculosis: an analysis of tuberculosis and treatment practices in urban Sindh, Pakistan. *Tuberc Lung Dis* 1996;77:86-92.
3. Khan S, Rasul S, Haq M, Chaudhry K, Waheed K, Ali T. Survey of knowledge of General Practitioners for the diagnosis and treatment of Tuberculosis in Lahore, Pakistan. *Pak J Chest Med* 2001;7:9-11.
4. Khan MB, Tahir M, Qureshi SM, Ashraf HM. Errors in the diagnosis and treatment of Pulmonary Tuberculosis. *Pak Armed Forces Med J* 2007;57:135-42.
5. Akhtar T, Imran M. Management of TB by practitioners of Peshawar. *J Pak Med Assoc* 1994;44:280-2.
6. Shehzadi R, Irfan M, Zohra T, Khan JA, Hussain SF. Knowledge regarding management of Tuberculosis among General Practitioners in Northern Areas of Pakistan. *J Pak Med Assoc* 2005; 55:174-5.
7. Hussain H, Akhtar S, Nanan D. Prevalence of and risk factors associated with Mycobacterium tuberculosis infection in prisoners, North West Frontier Province, Pakistan. *Int J Epidemiol* 2003;32:794-9.
8. Hussain A, Mirza Z, Qureshi FA, Hafeez A. Adherence of Private Practitioners with the National Tuberculosis Treatment Guidelines in Pakistan: a survey report. *J Pak Med Assoc* 2005;55:17-9.
9. Jabbar A, Haider M. Anti tuberculosis treatment; general physicians approach. *Professional Med J* 2007;14:528-30.
10. Khan JA, Hussain SF. Anti-tuberculous drug prescribing: doctors' compliance at a private teaching hospital in Pakistan. *Trop Doct* 2003;33:94-6.
11. Kitzinger J. Qualitative Research: Introducing focus groups *BMJ* 1995;311:299-302.
12. Jackson L, Yuan L. Family Physicians managing tuberculosis. Qualitative study of overcoming barriers. *Can Fam Physician* 1997;43:649-55.
13. Ongut G, Ogunc D, Gunseren F, Ogus C, Donmez L, Colak D, et al, Evaluation of the LCT Tuberculosis test for the routine diagnosis of tuberculosis. *BMC Infect Dis* 2006;6:37.
14. Lee CH, Kim WJ, Yoo CG, Kim YW, Han SK, Shim YS, et al, Response to Empirical Anti-Tuberculosis Treatment in Patients with Sputum Smear-Negative Presumptive Pulmonary Tuberculosis. *Respiration* 2005;72:369-74.
15. Treatment of Tuberculosis. Guidelines for National Programmes. Third edition. World Health Organization. Geneva 2003