TUBERCULOSIS TREATMENT AND PRIVATE PRACTITIONERS, KATHMANDU VALLEY

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Key Words: Tuberculosis, private practitioners

SUMMARY:

SETTING: An urban municipality of 150,000 citizens in Kathmandu valley where approximately 650 TB patients annually start treatment in the public sector.

OBJECTIVE: To determine the caseload of TB patients, treatment practices used in the private sector and professional characteristics of private practitioners involved in TB care.

DESIGN: A self-administered questionnaire was distributed to private practitioners in the area.

RESULTS: Forty-three (73%) of 59 private practitioners returned the questionnaire, and form the base for the analysis. Twenty-eight (65%) were working also in government clinics. Thirty-nine (93%) were treating tuberculosis patients. During the previous month, 68 suspected cases of pulmonary tuberculosis and 78 suspected extrapulmonary cases had been seen. A total of 97 patients were started on anti-TB treatment, 24 (25%) of those managed by surgical specialists. Twenty (51%) of the doctors prescribed internationally or nationally recommended regimens (i.e. 2 EHRZ/4HR or 2 EHRZ/6HE) to new pulmonary TB patients. Thirty-three (85%) reported referral of certain categories of TB patients to governmental or non-governmental facilities. Twenty-six (79%) referred their patients primarily to the National Tuberculosis Centre. The main reason for referral mentioned by doctors (61%) was the patient's inability to afford treatment in the private sector.

CONCLUSION: There quarters of the private practitioners used sputum smears for diagnosis, but only about half prescribed appropriate treatment regimens. Extrapulmonary TB cases form a substantial part of the case-load and approximately one fourth of all TB patients are being treated by surgical specialists. The cost of TB treatment in the private sector is too high for many patients. Informal links are already evident between the public and private sector but collaborative efforts need to be increased.

INTRODUCTION:

South Asia has a large number of tuberculosis patients (about 40% of TB cases worldwide (1) and a large private health sector (2). The private sector has grown because of resource shortages in the public sector and its inability to meet populations' expectations (3). Private doctors are often preferred by the patients because of their more convenient hours and more personalised services. They can offer a wide variety of preventive and curative services, are often more accessible to the general population and frequently the first contact with the health care system when a person falls ill (4,5). Studies from India have shown that two thirds of TB patients had visited private practitioners when they first developed chest symptoms, and more than half had been diagnosed by private doctors (6,7,8).

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In Nepal over 10,000 new cases of smear positive tuberculosis are notified every year. The case notification rate is currently 50 per 100,000 for smear positive tuberculosis and 107 per 100,000 for all forms of TB (9), with rates of infection four times higher in the urban areas than mountainous areas. The increased population density, migrating population, homelessness and HIV infection all contribute to an increase in the risk of infection in urban areas. It is estimated that up to 50% of patients with TB are managed in the private sector in urban areas despite free treatment for TB being available at most government health posts and district hospitals in Nepal (10). The NTP has been strengthened and it has been stated by WHO that there are good prospects for developing a model programme for Southeast Asia (11). So far however no role has been designed for the private sector in the NTP.

The objective of the study were; to determine the caseload of TB patients, the treatment practices used in the private sector and the professional characteristics of private practitioners involved in TB care in Lalitpur municipality, Kathmandu valley.

STUDY DESIGN AND METHODS:

The study was performed between January and April 1998. A list of private practitioners was compiled by a door to door survey in Lalitpur municipality. The municipality has approximately 150,000 citizens and 650 TB patients are estimated to receive treatment annually in the public sector (9). Ninety-three licensed private practitioners were identified in the selected area. Private practitioners are defined as licensed allopathic for-profit practitioner (12), excluding allopathic doctors working for NGOs or for-profit practitioners with a non-allopathic training. All private practitioners belonging to specialties which were assumed to see TB patients were then included in the study. This applied to fifty-nine chest physicians, general surgeons, orthopaedic surgeons, paediatricians and general practitioner. A self-reported questionnaire was designed and pretested outside the study area. The questionnaire was designed to collect information on i) demographic details such as age, sex, place of residence; ii) professional characteristics

including medical qualification, positions in government clinic and years of experience; iii) quantity of suspected and confirmed TB cases seen the previous month and diagnostic, treatment, referral practices. The questionnaire was then delivered to the private practitioners included in the study. A letter accompanied the questionnaire to explain the purpose of the study. The objective of the study was explained emphasising plans for future collaboration between the National Tuberculosis Programme (NTP) and the private sector. When it was not possible to meet the doctors in person, the receptionists of the clinic or pharmacy owner were requested to forward the questionnaire to the doctor. The researchers then went round to the clinics to collect the questionnaires. A reminder letter was given to all private practitioners who had not returned their questionnaire after six weeks.

Responses to structured questions were analysed using EPI-INFO statistical package version 6.04 (Centres of Disease Control, Atlanta, GA 30333, USA). Responses to open-ended questions were analysed descriptively and thematically.

RESULTS:

The questionnaire was returned by 43 (73%) of the doctors included in the study. The characteristics of the doctors who returned the questionnaire are presented in table 1. Thirty-six (84%) of the private practitioners were male and 29 (67%) had more than 10 years in clinical practice. The median hours of work in a private clinic was 12 hours/week. Twenty-eight (65%) of the doctors were also working in government clinics and 28 (65%) were members of the Nepal Medical Association. Thirty-nine (93%) were treating tuberculosis patients in their clinic.

CASE-LOAD OF TUBERCULOSIS PATIENTS:

During the previous month, 32 (82%) doctors had seen 164 pulmonary and 77 extrapulmonary cases. Twenty-seven (69%) doctors had started 97 suspected TB patients on treatment. Thirty-one (32%) of these cases had sputum positive pulmonary TB and the remaining 66 (68%) were sputum negative pulmonary or extrapulmonary cases (Table 2).

DIAGNOSTIC PRACTICES:

Private practitioners (n=32) who had seen suspected TB cases during the previous month were asked about diagnostic tools used. Thirty-two (100%) had recommend chest X-ray with/without sputum examination or other tests. Twenty-three (72%) had recommended both chest X-ray and sputum examination. Other tests recommended by physicians were Mantoux test 21 (66%), and sputum culture 8 (25%). Blood tests and biopsies were also mentioned.

TREATMENT PRACTICES:

Thirty-nine practitioners (91%) prescribed anti-TB drugs, while 4 (9%) of the respondents did not treat TB patients in their clinics. Thirty-three (85%) did specify the drug regimen used for uncomplicated pulmonary tuberculosis. Fourteen different combinations of drugs were used. All were using various combinations of three or more of the five first-line drugs, namely streptomycin (S), isoniazid (H), rifampicin (R), ethambutol (E) and pyrazinamide (Z). None were using thiacetazone. All doctors used an initial intensive phase, which lasted between 2-3 months. Eight (21%) doctors were using the regimen recommended by the NTP, i.e. 2 HRZE/6HE (two month of isoniazid, rifampicin, pyrazinamide and ethambutol followed by six months of isoniazid and ethambutol) and 12 (31%) were using internationally recommended regimens, i.e. 2 HRZE/4RH. Eleven (28%) were prescribing regimens for longer periods than necessary and 1 doctor (3%) was prescribing a regimen which was too short. No significant association was seen between describing recommended regimens and any characteristics of the private practitioners.

TREATMENT MONITORING:

Thirty-one (79%) of the doctors responded to the question on monitoring of treatment. None of the doctors were giving treatment under supervision. For monitoring the patients who presented on their own, 21 (54%) advised both X-ray and sputum. Five (13%) private practitioners advised only X-ray and two (5%) recommended only sputum. Ten (26%) saw a TB patient for the first follow-up visit one week after starting treatment, 11 (28%) waited two weeks and 10 (26%) one month. Many doctors commented that in case of problems the pa-

tient was encouraged to see the doctor at any time.

REFERRAL TO TUBERCULOSIS PATIENTS:

Thirty-three (85%) of the doctors responded that they regularly refer tuberculosis patients to government and NGO clinics. Twenty-six (67%) referred primarily to the National Tuberculosis Centre (NTC). The main reason for referral mentioned (61%) was the patients' inability to afford treatment in the private sector. Other categories included diagnostic difficulties, need of hospital admission or suspected multi-drug resistance (MDR). Ten (26%) private practitioner had seen suspected MDR cases in their private clinics. Twenty-nine (74%) of the doctors saw TB patients from outside Lalitpur municipality and 13 (33%) saw patients from outside Kathmandu valley.

DIRECT COSTS OF TREATMENT IN THE PRIVATE SECTOR:

The respondents' estimates of the diagnostic costs for a TB patient ranged from 200-8000 NRs with a median of 500 NRs¹. (Put in the Footer = In addition to diagnostic costs come the costs of medicines of approximately 3,500 NRs and consultation costs of 100-150 NRs/visit) The higher range represent costs for biopsies, CT scan in the case of extrapulmonary tuberculosis.

PERCEIVED DIFFICULTIES IN TREATING TUBERCULOSIS PATIENTS:

The main difficulties perceived by private practitioner were; follow-up and compliance (77%), high costs of anti-TB drugs (44%), quality of sputum examination in private laboratories (32%), side effects of medication (15%) and problems patients faced when being referred to NTP clinics as a consequence of perceived prejudice against private practitioner (8%).

DISCUSSION:

The private sector is the first source of help for a significant number of TB patients in Asia. However, the knowledge and practices of TB treatment among private practitioners (13,14,15,16,17,18) has shown to be unsatisfactory. There is a marked reliance on X-ray and neglect of sputum examination. The majority of private practitioners are not

aware of, or are not prescribing the treatment regimen recommended.

Our study shows that a significant number of TB patients are being treated in the private sector in the municipality of Lalitpur; 97 cases were started on treatment during one month. In comparison approximately 650 patients are being treated annually in the public sector in the study area (9).

Our study design did not allow for estimates of the proportion of patients moving between sectors.

There are four main findings from this study. The first finding is that the knowledge about treatment/regimens appears to be considerably higher among private practitioners in Nepal compared with their Indian colleagues. More than fifty percent prescribed nationally or internationally recommended regimens compared to less than 30% in a recent study from India (17). In the Indian study, twenty-eight percent were prescribing anti-TB treatment longer than necessarily while more than 50% were over treating their patients. Our study showed that 85% of the private practitioners sometimes refer their patients to government facilities while a study by Singla et al. (1998) (17) revealed that in Delhi only 38% would do so even when the patient was too sick to be treated by a private practitioner. Seventy-two percent of the doctors in our study used sputum examination with or without other tests for diagnosing TB, while only 12% did so in the Indian study (17). Such differences are likely to reflect overall structural differences in context, especially the structure of the health service.

Better knowledge and treatment practices could be explained by the second finding, that 65% of the doctors in the private clinics were also working in government clinics, although in this study no significant difference was found in knowledge and practice. It is important to notice that the majority of the private practitioners in Nepal do not form a separate group from the public sector. In India however, the majority of private practitioners were not engaged in government clinics (18). There is "dual practice" by government employed physicians, leading to a greater awareness of government clinics, facilities and guidelines. The extent of dual

practices in other countries is not well documented (12). The overlapping of practitioners in supposedly competing systems introduces an interesting dimension to the public-private debate (19).

The third important finding is the substantial amount of extrapulmonary cases being treated in the private sector. Although these are cases stated to be of lower priority from a public health perspective (20) it is important for the individual patient with extrapulmonary TB to have access to diagnostic facilities and treatment. Extrapulmonary TB cases are often difficult to diagnose and end up in the private sector after many months of searching for help in the public sector. Some of the private practitioners treating extrapulmonary cases commented on the difficulties such patients have in receiving treatment in the public sector. This study is the only one to our knowledge which systematically includes private practitioners from a variety of specialties.

The fourth finding relates to the private doctors' reasons for referral of TB patients from private clinics to the public sector. For 61% of private doctors the main reason for referral of TB patients to the public sector was the patient's inability to afford treatment in the private sector. This finding supports other studies which suggest that not only well-off patients but also poor patients seek care in the private sector (21,22). The financial costs for patients are high; this is especially true for extrapulmonary cases because of the sophisticated diagnostic investigations used.

Studies from India and elsewhere have led to an increasing awareness that the private sector can not be neglected by NTPs. Collaboration between the public and private sector is vital in the effort to give good care to the individual and prevent drug-resistance in the community (23,24,25,8). There is obviously room for improvement in the treatment practices of TB in the private sector in Lalitpur. Training and regular updates have to be the cornerstones in any strategy created to improve care provided for TB patients. Correct prescribing and dispensing practices, however, is not enough. Patients may interrupt their treatment because of lack of

money and/or because they feel cured and are not aware of the importance of completing the full course of treatment. The cost of private TB treatment is too high for many patients, and private practitioners are aware of it. The high costs inevitably result in the interruption of treatment and often mean that patients consume an inadequate or inappropriate combination of drugs (16,21). Financially disadvantaged patients therefore are in need of a managerial system linking private clinics to the provision of affordable and acceptable treatment. The advantage of having providers who practice both in government and private clinics should be acknowledged and used. Individual doctors with strategic positions in both sectors should be identified for the creation of locally appropriate collaborative strategies in urban Nepal.

Table 1
Characteristics of private practitioners who participated in the study.

	n (%)
Total	43
Age	
25-30	4 (9.3)
31-35	10 (23.3)
36-40	9 (20.9)
41-45	7 (16.3)
46-50	9 (20.9)
>51	4 (9.3)
Sex	
Male	36 (83.7)
Female	7 (16.3)
Years of experience in practice	
<=5	8 (18.6)
6-10	8 (18.6)
11-15	8 (18.6)
16-20	6 (14.0)
>=20	13 (30.2)

Table 2
Number of patients who started treatment during the previous month by speciality and sputum status.

Speciality	No of TB patients started treatment previous month (No AFB positive)
Chest Physician	41 (17)
General Surgeon/ Orthopaedic Surgeon	24 (4)
GP/MBBS	19 (6)
Paediatrician	13 (4)
Total	97 (31)

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