

## **334. Acceptability of traditional healers as directly observed treatment providers in tuberculosis control in a tribal area of Andhra Pradesh, India**

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In developing countries, traditional healers (THs) play a significant role as primary health care providers and efforts have been made to incorporate them into various health care programmes. Involvement of these THs in RNTCP for referring TB patients for diagnosis and supervision of treatment may improve the TB control as observed in various studies. In this direction a study was conducted during May-June 2001 in a tribal area of Vizianagaram district (Andhra Pradesh) to 1) examine the diagnostic and treatment practices for TB by THs; 2) understand health seeking behaviour for TB among tribal groups; 3) evaluate the acceptability of THs to public health workers; and 4) assess ways of achieving collaboration of THs in the TB programme.

In-depth interviews were held with 120 THs at their household. The snowball technique was used to enumerate and map out the THs in the two selected mandals. Thirtyseven exit interviews were conducted with tribal TB patients on RNTCP treatment at the four PHCs in the two mandals. Four focus group discussions (FGDs), one in each PHC, were conducted with 6-8 tribal TB patients. Interview with 8 NGOs and 38 public health staff conducted.

There were 18 THs per 1000 population. Of the 120 THs interviewed, 15 (13%) claimed to be TB specialists. Seventy two THs were aware of TB, 65 (90%) considered prolonged cough an important symptom and 53 (74%) believed that TB could be cured with allopathic drugs. Forty nine (68%) THs were interested to collaborate as

DOTS providers, 54(75%) referring symptomatic individuals and 18 (25%) were interested to offer treatment for side effects.

The findings of this study reveals that involvement of THs in the TB control programme may improve services as they are a major health service provider in tribal areas and are acceptable as DOT providers to patients, public health providers and NGO workers. They can be educated about and involved in the RNTCP in tribal districts in Andhra Pradesh. They could contribute by referring patients to reduce delays in diagnosis, and to increase case finding and adherence to treatment.

## **335. Vitamin A levels in sputum-positive pulmonary tuberculosis patients in comparison with household contacts and healthy 'normals'**

Ramachandran G, Santha T & Garg R et al; Tuberculosis Research Centre, Chetput, Chennai, India ; **Int J Tuberc Lung Dis** 2004, 8/9, 1130-1133

Malnutrition among pulmonary tuberculosis (PTB) patients is frequently observed. Several studies have shown decreased vitamin A in serum during TB infection. Vitamin A supplementation results in a modulation of immune response in patients with TB and can reduce morbidity and mortality by enhancing immunity. Serum levels of vitamin A among patients with PTB have not been documented from South India. In this direction this study was conducted by Tuberculosis Research Centre (TRC), Chennai to estimate serum vitamin A in PTB patients at the start and end of anti-tuberculosis treatment.

Serum vitamin A was estimated in 47 smear positive, newly diagnosed PTB patients attending the OPD clinic of the TRC at Chennai and Madurai; 46 close family contacts of these patients with no serious illness residing and sharing the same food in the same house and 30 healthy normal subjects working at the TRC with no

serious illness. All the study subjects were aged 18 years or more. A diagnosis of PTB was confirmed if sputum smear tested positive for AFB. Fasting blood samples were collected from all the study subjects and the serum was separated and stored at -20°C until analysis. High performance liquid chromatography (HPLC) was used for estimating Vitamin A in the serum.

Mean serum vitamin A in-patients at the start of treatment was 21.2 µg/dl, which was significantly lower than in household contacts (42.2 µg/dl) and healthy 'normals' (48.1 µg/dl). The vitamin A levels in patients increased following treatment. After Completion of treatment; the mean serum Vitamin A levels from 21.0 mg/dl to 38.9 Mg/dl; this increase was statistically significant (  $P = < 0.001$  ). The findings of these study reveals that the low vitamin A levels observed in patients returned to normal at the end of anti-tuberculosis treatment without vitamin A supplementation.

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### **336. Detection of tubercle bacilli in sputum : Application of sodium hypochlorite concentration method**

Saxena S, Mathur M & Talwar V; Dept. of Microbiology, University College of Medical Sciences & GTB Hospital, Shahadra, Delhi; **J Comm Dis 2001, 33/4, 241– 244.**

India accounts for nearly one third of the global burden of the disease tuberculosis. The major objectives of tuberculosis control programme are to identify and treat patients with infections of pulmonary tuberculosis, the diagnosis of which relies on bacterial examination of sputum. Culture of *Mycobacterium* is the reference method for detection of tubercle bacilli but it is slow taking 6 – 8 weeks for diagnosis. Newer approaches to diagnosis like polymerase chain reaction are very costly. Sputum microscopy forms the mainstay of diagnosis especially in resource poor settings while smear-positive cases are more infectious than smear negative cases and hence more

important from public health perspective. However this method is hampered by lack of sensitivity.

A study was conducted at Dept. of Microbiology, University College of Medical Sciences and GTB Hospital, Delhi, wherein it was found that liquifaction by sodium hypochlorite and concentration of sputum before Ziehl Neelsen staining improves yield and also makes examination of smears rapid and convenient. A total of 304 sputum samples were studied by direct staining and after sodium hypochlorite treatment and centrifugation. Direct smears stained with Auramine-phenol were also examined. The number of positives detected were 106. Use of sodium hypochlorite method increased the number of positive samples from 52 to 96.

The authors opine that the method is simple, as the only extra reagent required is sodium hypochlorite, which is easily available. Additional advantage is that sodium hypochlorite, being a potent disinfectant, reduces the risk of laboratory-acquired infections. However the only disadvantage is the time taken for sample preparation and requires access to a centrifuge. Low cost centrifuge can easily fulfill the requirement.

### **337. Access and adhering to tuberculosis treatment: barriers faced by patients and communities in Burkina Faso**

Sanou A, Dembele M, Theobald S et al; Dept. of International Health, Liverpool School of Tropical Medicine, Pennbroke Place, Liverpool, Merseyide L3 5QA, UK; **Int J Tuberc Lung Dis 2004, 8/12, 1479 –1483.**

Improving tuberculosis case finding and case holding rates requires an understanding of response to the barriers faced by TB patients. TB notification rates in Burkina Faso are low. In 2000, notification rates were 16/100000 population while the actual incidence rate was 60/100000.

Hence a study was conducted in three districts of Burkina Faso 1) to explore patients' and community members' perceptions and

problems associated with accessing formal tuberculosis treatments; and 2) to identify patients' and community members' perceptions and problems associated with adhering to formal TB treatment. A total of 28 focus group discussions (FGDs) were conducted. The in-depth interviews enabled barriers and problems, and especially those of a sensitive nature to be explored in-depth with an individual. The FGDs provided insights into the ways group dynamics and interaction affected participants' perceptions and priorities. Questions were open-ended and were followed up by probing questions to further explore participants' experiences. Observation allowed another type of insight and the findings from these different methods were triangulated against each other in the analysis process.

The authors conclude that the patients experience three sets of inextricably linked barriers to successfully treating TB: attending the health center initially & repeatedly and experiences whilst at the health center. These barriers are further complicated by geography, poverty and gender. The authors opine that the challenge ahead lies in moving beyond documenting barriers from patient's perspectives to addressing them in resource-poor contexts.

### **338. Tuberculosis and nutrition : disease perceptions and health seeking behaviour of household contacts in the Peruvian Amazon**

Baldwin MR, Yori PP, Ford C et al; Wellcome Center for Clinical Tropical Medicine, Dept. of Infectious Diseases, Hammersmith Hospital, 150 Du Cane Road, London W12 0NN, UK; **Int J Tuberc Lung Dis** 2004, 8/12, 1484 – 1491.

Tuberculosis continues to rank among the world's most serious health problems despite the availability of effective chemotherapy. Early case detection and treatment is the cornerstone of short-term TB control, while improvement in socio-economic conditions is a long-term solution. Psychosocial factors are dominant forces in health seeking behavior Salient among such factors are

the health beliefs of patients, the understanding and information people have from family, friends and neighbours as to the nature of a health problem, its cause, and its implications. Studies of TB patients have shown that cultural based explanations that patients give to symptoms can be strong barriers to early diagnosis, and that knowledge about the health beliefs of patients can be used to tailor TB control programs to screen, diagnose, and treat patients more successfully.

A study was done to investigate how knowledge and beliefs of household contacts about TB affected health-seeking behaviour. Seventy-three patients finishing treatment and seventy-nine of their adult household contacts were interviewed. Contacts were knowledgeable about free screening and treatment, but contacts who noted weight loss, not cough, were more likely to be screened for TB ( $P=0.03$ ). Forty-two percent reported that TB was prevented by nutrition, 28% by separating eating utensils, and only 19% by avoiding a coughing patient. Only one household contact reported being stigmatized. Stigma centered upon nutrition and only 12% knew of the association between TB and HIV. Only 14% had a BMI <20, yet 30% reported regularly going to sleep hungry. Free food packages were reported to be the most important reason for treatment adherence by 33% of patients.

The authors opine that the contacts misperceived TB as a nutritional disease and hence did not fear airborne transmission, which should be corrected by public health education. Stigma appeared to be minimized because risk was perceived as personal, through malnutrition, rather than exposure-based. The authors feel that nutritional incentives have great potential utility in this population to simultaneously augment antimycobacterial immunity whilst utilizing community perceptions to encourage early TB diagnosis and treatment adherence.

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