

Knowledge About Diagnosis & Management Of Paediatric Tuberculosis In A Group Of Doctors In Karnataka

Joel baiju, Shamshad khan, Prakash saldanha
Yenepoya medical college.

Abstract:

Introduction: Childhood TB is grossly under detected in most TB endemic areas due to multiple reasons. Most of the patients who go to TB centres would have already consulted General Practitioners (GP's) at one stage or other. **Materials & methods:** A prospective observational study in which total of 110 medical practitioners. They were provided with a pre-tested, structured questionnaire which included practitioners qualification, type of clinical practice and years of practice and the questions were framed as true/false questions and multiple choice questions on diagnosis and management of paediatric tuberculosis. **Results:** No significant difference was noted with type of practice and their knowledge. The overall percentage of knowledge in diagnosis of paediatric tuberculosis was only 56.4%. The overall knowledge percentage with regard to treatment aspect of paediatric tuberculosis was only 49%. **Conclusion :** More training programmes have to be included for the general practitioners and regular updating of knowledge should be done to recognize more cases of paediatric tuberculosis and reduce the case load in India. The results could help policy makers to design structured training programs to specific group of practitioners in future and could also provide additional baseline information for future surveys and training programmes.

Keywords:

I. Introduction

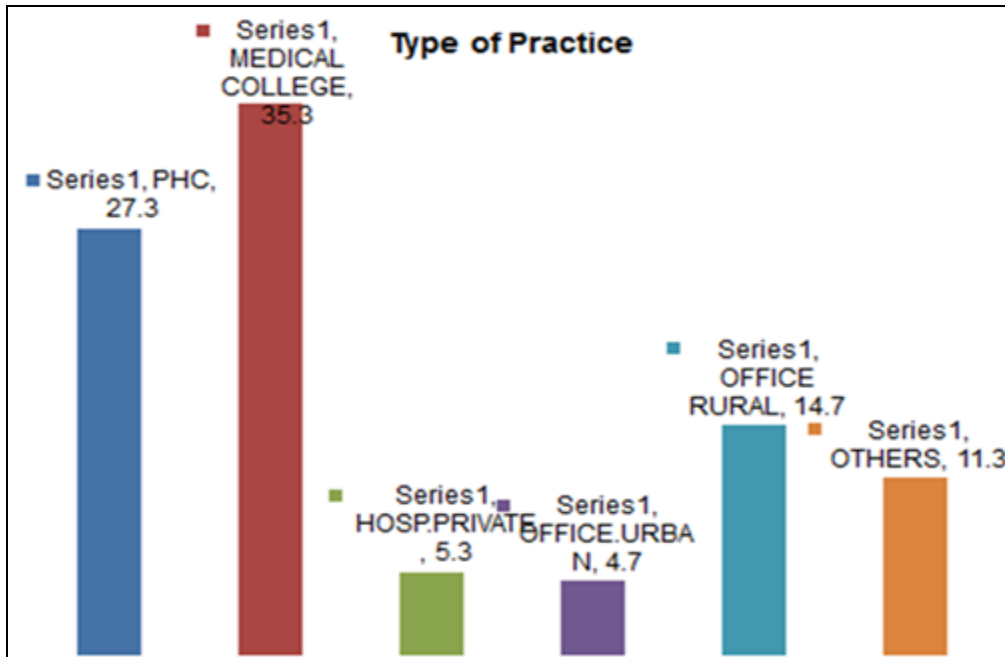
Worldwide incidence of tuberculosis is increasing. Between 2000 and 2020 new infected cases will be around 1 crore, around 35 million people may develop the disease by this period[1]. In certain high incidence prevalent areas around 40% of patients are children [2]. Diagnosis of newer cases of tuberculosis in a developing country like India is very much essential considering the case load [3-6]. Childhood TB is grossly under detected in most TB endemic areas due to multiple reasons. Most of the patients who go to TB centres would have already consulted General Practitioners (GP's) at one stage or other [7]. General practitioners play a major role in diagnosis, treatment, notification of cases of tuberculosis and appropriate health education to the public. The objective of the study was to assess the practices followed and their knowledge for the diagnosis and management of paediatric tuberculosis.

II. Materials & Methods

A prospective observational study in which total of 110 medical practitioners; which includes general practitioners, paediatricians and other specialists engaged in general practice (Orthopaedicians, Anaesthetists, dermatologists, and Obstetricians) were invited for a CME at a tertiary care centre in Karnataka for a talk on diagnosis and management of paediatric tuberculosis. They were provided with a pre-tested, structured questionnaire which included practitioners qualification, type of clinical practice and years of practice and the questions were framed as true/false questions and multiple choice questions on diagnosis and management of paediatric tuberculosis. 6 questions were about diagnosis, 4 questions on treatment and one question on sputum induction. Ethical clearance was obtained from the institutional ethics committee. Data was entered in Microsoft Excel spreadsheets and compared in SPSS (version 17.0).

III. Results

35.3% of the practitioners were working in medical colleges, 27.3% in Primary health centres, 14.7% rural office practice, 11.3% others, 4.7% in office urban practice, 5.3% in private hospital. No significant difference was noted with type of practice and their knowledge. Specialists who were engaged in practice showed better knowledge compared to others. Experience wise a higher percent of knowledge was observed in the practitioners who were practicing for more than 15 years in diagnosis of tuberculosis, whereas the younger doctors showed a better percentage in knowledge of treatment of tuberculosis and the newer modalities.



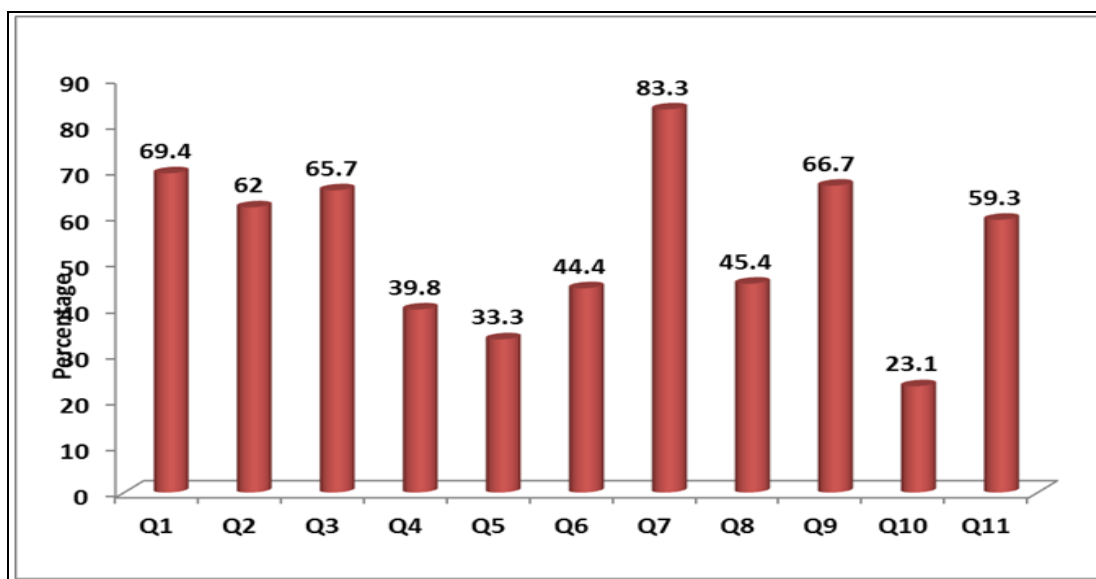
Type of practice (Fig-1.)

3.1 Diagnosis

69.4% doctors were able to answer correctly that 10 Tuberculin units are not recommended for children. 62% of them identified the X-ray findings of tuberculosis correctly. 65.7% knew that demonstration of AFB is the most important investigation for diagnosis of tuberculosis to start treatment. Only 39% of them knew mantoux test was more reliable than IGRA. Only 33.3% could identify the site of primary complex in congenital Tuberculosis. Cut off value for mantoux reading was identified correctly by 66.7%. Methods of sputum induction were answered correct by 59.3%. The overall percentage of knowledge in diagnosis of paediatric tuberculosis was only 56.4%.

3.2 Treatment

83.3% knew exactly when to diagnose children as Multi drug resistant TB. The highest percentage was seen with respect to this question. The knowledge about clinical scoring utilised for treatment was correctly answered by only 44.4%. Xdr TB diagnosis was correctly answered by only 45.4%. The percentage of positivity in newer diagnostic culture methods were aware by only 23.1% of the practitioners (which was the lowest). The overall knowledge percentage with regard to treatment aspect of paediatric tuberculosis was only 49%.



Questions (Fig-2.)

IV. Discussion

The majority of the practitioners were unable to answer questions directed towards diagnosis and management, highlighting their gap in knowledge of paediatric tuberculosis.

4.1 Diagnosis

More gap was seen in knowledge of diagnosis, as 34% of the practitioners were unaware of the most important diagnostic method of tuberculosis. (Demonstration of AFB). 30% of the study group couldn't identify the correct strength of tuberculin strength used for mantoux test which can lead to false positive results and can result in false diagnosis which may further build up the TB case load. The chest X-ray findings were wrong for 38% of the group. According to recent guidelines the diagnosis of smear negative tuberculosis is made when demonstration of bacilli is not done, but mantoux and chest X-ray findings are positive and a child is treated as smear positive if all the three are positive. The knowledge in these areas have to be more upgraded to achieve better sensitivity for diagnosis, followed by treatment and better control of cases of tuberculosis. Sputum induction methods were rightly answered by 59.1%, but 40.9% were lacking.

4.2 Treatment

It was good to see that 83.3% were able to correctly identify when to diagnose multi drug resistant tuberculosis. 56% of the study group were not able to say that clinical scoring utilised for diagnosis of tuberculosis can be used to start treatment. 54.5% were not able to identify when to diagnose Xdr Tuberculosis. 77% of the practitioners were not aware of the positivity of the newer diagnostic culture methods. More upgradation is definitely needed in the newer aspects.

V. Conclusion

The results are suggestive of a certain gap in knowledge of the diagnosis (56.4%) and management (49%) of paediatric tuberculosis. More training programmes have to be included for the general practitioners and regular updating of knowledge should be done to recognize more cases of paediatric tuberculosis and reduce the case load in India. Regular CME'S have to be conducted. The results could help policy makers to design structured training programs to specific group of practitioners in future and could also provide additional baseline information for future surveys and training programmes.

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