

Original article:

Study of detection of tuberculosis (TB) infection or disease among aged < 6years of house hold contacts of sputum positive cases

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Abstract:

Introduction: India has one of the highest tuberculosis (TB) burdens globally, accounting for 20% of the new 8.6 million TB cases annually .While the burden of childhood TB in India is not known, regional data from the World Health Organization (WHO) indicate that sputum microscopy smear-positive TB in children (<14 years old) accounts for 0.6%–3.6% of all reported cases

Material and methods: All the contact aged less than 6 years of sputum positive adult patients diagnosed at RNTCP DOTS centre was taken in the study & to detect TB infection or disease. Children under the age of 6 years who were household contacts of diagnosed adults with pulmonary tuberculosis constituted the study population. Household contact was defined as a child living in the same house as the adult patient.

Results: In our study there was 86 children ,out of which 49 children had malnutrition i.e 56.9%, malnutrition was classified by IAP classification , no malnutrition in 28.6%, mild malnutrition =55.8%, severe malnutrition = 15.7%. Whereas, In study of M.sigh129 , this study was about the prevalence of tuberculosis infection among children in household contact with adults having pulmonary tuberculosis, and identify the possible risk factors .malnutrition was important risk factor, all the children was classified as per IAP classification , no malnutrition =34.2%, mild malnutrition =55.8%, severe malnutrition = 15.7%.

Conclusion: Contact tracing should be done routinely in evaluation of childhood-tuberculosis .

Introduction:

India has one of the highest tuberculosis (TB) burdens globally, accounting for 20% of the new 8.6 million TB cases annually^{1,2} .While the burden of childhood TB in India is not known, regional data from the World Health Organization (WHO) indicate that sputum microscopy smear-positive TB in children (<14 years old) accounts for 0.6%–3.6% of all reported cases³ .However, because the majority of children are sputum microscopy smear negative, these data underestimate the true burden of childhood TB. It is estimated that childhood TB constitutes 10–20% of all TB in high burden countries, accounting for 8–20% of TB-related deaths.⁴ The epidemiology of TB in young children (<5 years old), a vulnerable population where diagnosis and treatment are most challenging. Children are more likely to develop disease after infection and are more likely to develop extra pulmonary and disseminated tuberculosis. Risk of transmission increases with closeness of contact, overcrowded living conditions, and degree of infectiousness of TB case.⁵

Material and methods:

All the contact aged less than 6 years of sputum positive adult patients diagnosed at RNTCP DOTS centre was taken in the study & to detect TB infection or disease. Children under the age of 6 years who were household

contacts of diagnosed adults with pulmonary tuberculosis constituted the study population. Household contact was defined as a child living in the same house as the adult patient.

Children who had been previously treated for tubercular infection and disease was excluded from study.

Detailed history and clinical examination of children less than <6 years old who were in household contact with adult patients was performed. This included history of fever and/or cough of greater than two weeks duration, failure to gain weight, loss of appetite, decline in weight respiratory distress and symptoms of extra-pulmonary tuberculosis such as lymphadenopathy.

History of BCG vaccination was enquired and scars mark examined.

Results:

In our study there was 86 children ,out of which 49 children had malnutrition i.e 56.9%, malnutrition was classified by IAP classification , **no malnutrition** in 28.6%, **mild malnutrition** =55.8%, **severe malnutrition** = 15.7%.

Whereas, In study of M.sigh129 , this study was about the prevalence of tuberculosis infection among children in household contact with adults having pulmonary tuberculosis, and identify the possible risk factors .malnutrition was important risk factor, all the children was classified as per IAP classification , **no malnutrition** =34.2% , **mild malnutrition** =55.8%, **severe malnutrition** = 15.7%.

Discussion:

Tuberculosis is one of the most wide spread infection and affects almost 1/3 rd of world's population. India has one of the highest tuberculosis (TB) burdens globally, accounting for 20% of the new 8.6 million TB cases annually .While the burden of childhood TB in

India is not known, regional data from the World Health Organization WHO) indicate that sputum microscopy smear-positive TB in children (<14 years old) accounts for 0.6%–3.6% of all reported cases. However, because the majority of children are sputum microscopy smear negative, these data underestimate the true burden of childhood TB. It is estimated that childhood TB constitutes 10–20% of all TB in high burden countries, accounting for 8–20% of TB-related deaths. The epidemiology of TB in young children (<5 years old), a vulnerable population where diagnosis and treatment are most challenging.^{5,6}

Childhood tuberculosis is mostly due to contact with adult tuberculosis patients ,as sputum positive patient are more infectious than sputum negative patient, we have taken contacts of sputum positive patients, tuberculosis disease is preventable by contact tracing before developing tuberculosis infection to tuberculosis disease.

In our study at tertiary care rural hospital there was 151 sputum positive adults diagnosed at RNTCP DOTS center during 2 years of study. 86 children contact was taken in study by inclusion and exclusion criteria. ⁷

This present study was conducted in the department of pediatrics in post graduate teaching hospital ,in rural India during period of 2yrsfrom September 2014 to august 2016.There were 151 adult patient diagnosed as sputum positive tuberculosis at RNTCP,DOTS center .Among which children <6yrs in contact with sputum positive adult were taken in the study. By inclusion & exclusion criteria 86 children who fulfilled the criteria were taken in the study. All children underwent detailed history ,clinical examination, anthropometric examination, tuberculin test, laboratory examination, radiological examination and few patient needed FNAC.

Conclusion:

Contact tracing should be done routinely in evaluation of childhood-tuberculosis .

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