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## Evaluating Children, as a Part of Contact Tracing of an Adult with Tuberculosis Disease, a Tertiary Care Children Hospital Experience

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**Objectives:** Children usually acquire *Mycobacterium tuberculosis* from an adult with contagious tuberculosis. Vaccination of children with the bacille Calmette-Guérin vaccine and treatment of latent tuberculosis infection are principle health-care interventions to prevent new infections of *M. tuberculosis* and their progression to tuberculosis disease according to World Health Organization. It has been known that contact tracing is a key component of tuberculosis prevention, especially in children. The aim of this study was to evaluate the children who had been detected as a part of contact tracing of an adult with pulmonary tuberculosis.

**Methods:** Between January 2014 and December 2018, children who were referred to our Pediatric Infectious Disease Outpatient Clinic due to known household contacts of an adult with contagious pulmonary tuberculosis were reviewed retrospectively.

**Results:** There were 150 children referred to our hospital in 5 years. Seventy nine of them were female. Mean age was  $72.9 \pm 52.8$  months. The most common index case was father in 44 (29%) patients. Mean period between tuberculosis diagnosis time of index cases and admission of the child to our hospital was 55 days. Fifteen index cases were drug resistant pulmonary tuberculosis and three of them were multi drug resistant. Chest X-ray of 50 (30%) children were normal. The most observed signs at chest X-ray in remaining 100 children were bilateral perihilar, paracardiac and peribronchovascular thickening. Radiographic findings that compatible with tuberculosis were found on computered thorax tomography in 34 patients among the 84 patients who undergone tomographic investigation. These 34 patients and 4 patients who didn't undergone tomographic investigation were diagnosed as having primary pulmoner tuberculosis, one patient was diagnosed as renal tuberculosis. Unfortunately 8 of these patients with tuberculosis disease were lost to follow-up. Ninety-one patients were diagnosed as having latent tuberculosis infection or in window' s period. All of them were in follow-up and HIV negative. Twenty of 150 children that having the history of contact with adult tuberculosis did not complete the evaluation.

**Conclusion:** Out of 20 children with a history of tuberculosis contact, in our hospital setting 120 children who had been detected as a part of contact tracing of an adult tuberculosis case diagnosed with tuberculosis or latent tuberculosis infection or were started on tuberculosis preventive treatment. Because of the prevention of new infections of *M. tuberculosis* and their progression to tuberculosis disease is critical to reduce the burden of disease and death caused by tuberculosis, we emphasized the importance of contact tracing.

**Keywords:** Children, contact tracing, mycobacterium tuberculosis