

IMAGING DIAGNOSIS OF TUBERCULOSIS OF THE INTRATHORACIC LYMPH NODES IN CHILDREN: CHEST RADIOGRAPHY AND COMPUTED TOMOGRAPHY

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Background. The most prevalent type of tuberculosis in children is intrathoracic lymph node tuberculosis (ITLNTB). Nonspecific clinical signs and limitations of tuberculin skin test and sputum smear makes diagnosis of ITLNTB in children a challenge. Thus the diagnosis depends largely on chest imaging in children. **Objective of the study.** To determine the sensitivity and specificity of different imaging modalities- radiography and computed tomography- in infants and children suspected of having or diagnosed with ITLNTB. **Material and methods.** Extracted data from case studies conducted on patients with ITLNTB under the age of 16 from various databases (Radiopaedia, Elsevier, Science-direct, PubMed). A comprehensive analysis of about 11 articles containing clinical and radiological data was made. The study was centered on children since nodal involvement is more significant in infants and children than other age groups. **Results.** Lymphatic involvement is the hallmark of primary TB in children; a mediastinal adenopathy affecting

the paratracheal and subcarinal lymph nodes was seen in 83%–97% of children. In primary TB, the chest radiography showed hilar and para-tracheal lymphadenopathy on anteroposterior view (as well-defined asymmetrical soft-tissue mass) and in the subcarinal region on lateral view. Compared to plain radiographs, bilateral hilar involvement were often seen in CT. CT revealed adenopathy of subcarinal (90%), hilar (72%), anterior mediastinal, pericarinal and right paratracheal lymph nodes (96%) in children with ITLNTB. Active TB was detected as centrally hypodense lymphadenopathy >2 cm on CT. **Conclusion.** The first-line imaging modality for ITLNTB is chest radiography but early stages of the disease could not be diagnosed. Early TB signs were revealed by chest CT, but higher radiation exposure must be considered because children are more vulnerable to its adverse effects. **Keywords:** intrathoracic tuberculosis, radiography, CT, lymphadenopathy in children.