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## Radiologic manifestations of pulmonary tuberculosis in ICU

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### ABSTRACT

**Background:** Pulmonary tuberculosis (TB) is an important disease with various manifestations in intensive care units (ICU). Despite the availability of effective treatments for TB, the mortality for patients admitted with TB to an ICU remains high. Additionally, the history of exposure to TB may not be present, and evidence of active TB is present in less than 50% of cases. Therefore, understanding the typical distribution, patterns, and imaging manifestations of TB is crucial.

**Methods:** In this retrospective study, all patients admitted to ICU with clinical and laboratory-confirmed TB were enrolled. The classic information, i.e., chest X-ray (CXR) and computed tomography (CT), for each patient was analyzed. Likewise, the presence of a cavity, involved segments and patterns of parenchymal lesion were assessed. Finally, tentative diagnosis and disease activity, bronchogenic spread of the lesion with CT and bronchiectasis were recorded.

**Results:** Among the studied cases, 146 were laboratory-confirmed TB patients. The majority of patients had acute respiratory distress syndrome (ARDS) (16.0%, n = 24), followed by interstitial involvement (13.0%, n = 19), parenchymal nodular infiltration (12.0%, n = 18), alveolar consolidations (11.6%, n = 17), cavitary TB (11.0%, n = 16), pleural effusion (10.0%, n = 15), calcified parenchymal masses (9.0%, n = 13), ground glass opacities (8.0%, n = 12) and other manifestations (8.0%, n = 12). Radiographic evidence of lymphadenopathy was seen in up to 43% of adults and 96% of children. In the 73% of cases with parenchymal infiltration, more than one pulmonary segment was involved. Miliary TB was also observed in 5% of studied patients.

**Conclusion:** Different features of TB patients in the ICU may be easily misled, and internists should have a comprehensive knowledge of various radiologic manifestations of TB in order to use this information and not ignore it.

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