

MILIARY TUBERCULOSIS IN A NEONATE

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PURPOSE OF THE STUDY Tuberculosis (TB) constitutes a difficult diagnosis. In the Extra-Pulmonary Tuberculosis (EPTB), fewer bacilli than those found in pulmonary diseases are responsible for much greater damage. The paucity of bacilli combined with relatively inaccessible or unknown site of EPTB infection, makes laboratory confirmation of TB very difficult. This study is a report of a case of tuberculosis in a neonate who was BCG vaccinated.

METHODS Our laboratory received a hepatic biopsy, 3 rounds of gastric aspiration and vaccinal pus from a 3 months old Caucasian child.

The samples were investigated for the presence of acid – fast bacilli by Ziehl-Neelsen staining. Cultures were performed on Lowenstein-Jensen medium (bioMérieux) and in Middlebrook 7H9 (MGIT)-BD (Becton, Dickinson) and identification was performed by *AccuProbe* (Gen-Probe Incorporated San Diego, bioMérieux) and PCR – hybridisation reverse (MTBC, Hain - Lifescience). Antibiotic susceptibility tests were determined on 7H9. Isolated strains were typed by mycobacterial interspersed repetitive units (MIRUs).

RESULTS Microscopic observation revealed the presence of AFB in hepatic biopsy and vaccinal pus samples. Cultures were also positive in Lowenstein-Jensen medium and 7H9 for both samples. *M. tuberculosis* was identified in the hepatic biopsy sample, but in the vaccinal pus we identified *M. bovis* BCG strain.

The susceptibility testing revealed sensitivity to all the first line drugs in hepatic biopsy. The isolate from the vaccinal pus was susceptible to streptomycin; rifampicin and ethambutol, but resistant to isoniazid and pyrazinamide.

MIRUs typing showed different patterns for the two isolated strains.

CONCLUSION This is a case of a neonate BCG vaccinated who developed miliary tuberculosis. The mother and all the people who contacted the child were negative for PPD. Laboratorial analysis revealed *M. tuberculosis* in biopsies and *M. bovis* BCG in vaccinal pus. The child never left the hospital and died two months later.