

Ascites alone as the presentation of Congenital Tuberculosis

Purkait S¹, Banerjee P², Chatterjee A³, Pan A⁴

¹PGT, Dept. of Pediatric Medicine, ²Professor, Medical College & Hospital, Kolkata, ³Associate Professor CNMCH, Kolkata, ⁴lecturer, Department of Paediatrics, College Of Medical Sciences, Bharartpur, Nepal.

ABSTRACT

Congenital tuberculosis is a rare disease. It usually presents with respiratory distress, fever and organomegaly. We report a case of congenital tuberculosis presenting with ascites only.

Key Words: Congenital tuberculosis, Ascites.

INTRODUCTION:

Infection with tubercle bacilli either during the intrauterine life or before complete passage through birth canal is termed as congenital tuberculosis (TB), which is a rare disease with severe clinical presentation of Mycobacterium tuberculosis infection. The following is the report of a case of congenital TB which presented with ascites only at birth.

CASE REPORT

In our case the baby girl was born by caesarean section due to fetal distress preterm (Gestational age - 34weeks), low birth weight(1.7kg), small for gestational age (below 10th percentile), cried immediately after birth and presented with hugely distended abdomen leading to mild respiratory distress and laxity of anterior abdominal wall at birth. Distention was due to massive ascites which was obvious & progressive on two times serial antenatal ultrasonography (done at 29th & 33 week of GA). There was history of secondary infertility of the mother for seven years. Previous child was born by normal vaginal delivery without any complication and now growing normally. The mother was diagnosed empirically as genital tuberculosis for secondary

infertility as sputum for AFB, Chest X ray, hysterosalpingogram, endometrial curettage cytology and culture did not reveal Tuberculosis except for positive contact history and advised three drugs antitubercular regimen for six months. After two months, when she conceived this baby, had discontinued medications. Antenatal period was uneventful and no drug was taken except Iron & Folic acid.

Examination of the baby at birth revealed nothing significant except above mentioned findings but there was no organomegaly. Related investigations revealed normal haemogram, CRP- 2.3mg/dl, normal liver and renal function test. Blood culture showed no growth of any organism and TORCH screening was negative. Ascitic fluid study showed yellow colored, slightly turbid fluid(nonchylous), Protein 3.6g/dl, Albumin-3g/dl, Amylase-5U/L, Lipase-6U/L, Triglyceride-35mg/dl, Urea-43mg/dl, Creatinine-0.9mg/dl, Sodium-143 meq/L, Potassium-4.4meq/L, Chloride-110meq/L, Bilirubin-10.5mg/dl, Direct bilirubin-1.2mg/dl, Total cell count -4135/cmm among them 98% were lymphocytes, Adenosine deaminase-13.7 U/L, Gram staining and ZN staining showed no organisms. Culture of ascitic fluid showed no growth. Gastric aspirate for consecutive two days were negative. Chest X ray was within normal limits. Mantoux test was negative. USG abdomen showed significant ascites with no

Correspondence: Dr. S. Pankit
E-mail id: samiranpt@gmail.com

organomegaly, no genitourinary abnormality. Urinalysis and Intravenous Pyelogram (IVP) were normal. CSF study was within normal limits. Meanwhile DNA PCR for MTB (Real time) of ascitic fluid revealed positive result but liver biopsy did not show any architectural abnormality or primary focus. This time again tubercular screening test for mother (only contact person since birth) was negative but failed to trace out placenta for histology. During the period of investigations broad spectrum antibiotics did not show any improvement. Antitubercular drugs (Rifampicin, Isoniazide, Ethambutol, and I.V. Amikacin) were started immediately after receipt of PCR report. The improvement was noticed after 2 weeks during treatment with ATT. The ascites decreased gradually to a minimum amount which showed total cell count of 745 among which 72% were Lymphocytes (after 1 month of therapy). After 2 months, Ethambutol and Amikacin discontinued and others continued for another 10 months. Now at her one year of age there is no ascites and visual & auditory screening tests are normal.

Pic at 1 yr of age



Pic at 1 month of age



Pic at 1 yr of age



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Although TB is a common infection worldwide, congenital TB is very rare, with around 350 cases reported so far in the literature¹ and only about 10 cases from medical records in India.² Tuberculous bacilli may be transmitted from an infected mother to the fetus by the transplacental route, forming a primary complex in the infant's liver with secondary hematogenous spread, or by aspiration or ingestion of the infected amniotic fluid, leading to a primary focus in the infant's lung or gastrointestinal tract.³ As demonstrated in the present case, congenital tuberculosis is particularly difficult to diagnose. Congenital TB is difficult to distinguish from early postnatal infection. The widely accepted criteria by Cantwell et al³. for congenital TB include proven tuberculosis lesions of the newborn and one of the following: (1) lesions in the first week of life; (2) hepatic granuloma or primary hepatic complex; (3) TB of the placenta or maternal genital tract; or (4) exclusion of postnatal transmission. We believe that our patient developed TB in utero because mother was a default case and baby was symptomatic since in utero which itself satisfies both 1st & 4th criteria. According to Cantwell's review, hepatomegaly, fever and respiratory distress are the most frequent clinical features.³ In our case and other few reports, early signs and symptoms are often nonspecific and mimic more common neonatal diseases such as bacterial sepsis.^{4,5} Tuberculosis should be strongly suspected in an ill neonate with a poor response to conventional antibiotic therapy, especially in endemic areas for TB or if the mother has risk factors for TB. Symptoms may be present at birth but typical features of congenital TB usually appear after a few weeks. Our patient presented atypically with ascites which was obvious since antenatal period, as the only sign of TB. Few studies reported ascites as the initial presentation of congenital TB¹ but it is only 5% of

different presentations.⁶ Other reported uncommon manifestations of congenital TB included isolated otitis, lymphadenitis, facial nerve palsy, and TB of the spine.⁷⁻¹⁰ Our patient was finally diagnosed by a positive DNA PCR for *Mycobacterium tuberculosis* along with maternal contact history of TB and improvement of secondary infertility on ATD. Timely diagnosis of congenital TB is critical for prompt initiation of treatment and prevention of nosocomial transmission. Although infants lack powerful coughs, transmission may occur secondary to suctioning or direct contact. A 0.8% transmission rate from the neonates to hospital personnel has been reported.¹¹ Congenital and early postnatal infections have similar treatment and prognosis. Therefore, a more inclusive single categorization of perinatal TB has been suggested.¹² Although the optimal duration of therapy has not been established, many experts treat infants with congenital or postnatal acquired tuberculosis for 9 to 12 months because of the low immunologic capability in young infants.⁴ We also followed this dictum.

Congenital tuberculosis should be included in RNTCP to avoid dilemma regarding therapy and to improve outcome, prevent transmission and drug toxicity.^{13,14}

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