



UNCOMMON CAUSE OF PUERPERAL FEVER: TUBERCULOSIS

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ABSTRACT Puerperal fever is due to infection most often of the placental site within the uterus, infection of episiotomy wound, cesarean section incision. But here we report a case of tuberculosis of peritoneum as a cause of puerperal fever, which is a rare cause. TB abdomen may present without typical pulmonary symptoms and signs, making the diagnosis difficult for a physician. Ascitic fluid analysis, CBNAAT, ascitic fluid ADA levels will help the physicians to arrive at a diagnosis.

KEYWORDS : puerperal fever, peripartum tuberculosis, tb abdomen, tb peritoneum.

INTRODUCTION

A rise of temperature reaching 100.4 °F (38° C) or more (measured orally) on two separate occasions at 24 hours apart (excluding first 24 hours) within the first 10 days following delivery is called puerperal pyrexia.

Causes of Puerperal Pyrexia

- Puerperal sepsis
- Urinary tract infections: Cystitis, Pyelonephritis
- Mastitis, Breast abscess
- Wound infections: Cesarean section or Episiotomy
- Pulmonary infections: Pneumonia
- Septic pelvic thrombophlebitis
- malaria
- Others: Pharyngitis, Gastroenteritis.

Tuberculosis is a very rare case of puerperal fever.

Case report

A 20 years female, primigravida with uneventful antenatal period delivered a full-term male child weighing 2.2 kgs by normal vaginal delivery with lateral episiotomy. She presented on the 7th postpartum day with complaints of intermittent high-grade fever with chills and rigors since 4 days. She had a nonproductive cough since 3 days. She had 1 episode of vomiting on the day of admission. She had no other complaints. She is not a known hypertensive or diabetic. She had no significant past history of illness. Her husband had pulmonary tuberculosis 3 years back. He used ATT (antituberculous therapy) for 6 months and was declared cured. Their marital life is one year.

On examination: she had mild pallor, no jaundice, the thyroid is normal, no breast engorgement or tenderness, no enlarged lymph nodes, no hepatomegaly or splenomegaly. No markers of connective tissue disorders. Episiotomy wound was healthy, no retained products of conception were noted. Pulse -130 bpm, bp-100/70 mm hg. Temperature- 104 °F. SPO2-98% with room air. No heart murmurs are heard. Her lungs were clear on auscultation. Abdomen was mildly distended, no tenderness, no organomegaly, no palpable mass was noted. Hemoglobin- 8.4%, MCV- 93fl. WBC-6,900/cumm. platelets-1,87,000/cumm. ESR-45mm at first hour. LFT, RFT, serum electrolytes were normal. Serum amylase-60 IU/L, serum lipase- 29 IU/L. A complete urine examination was normal. Widal test – negative, smear

for malarial parasite was negative. Vaginal swab, Urine, and blood cultures were negative for bacterial growth. Serology for HIV, HCV, HBV were negative. Chest x-ray was normal. USG abdomen- showed moderate ascites, no retained products of conception were noted.

She was empirically started on piperacillin-tazobactam, clindamycin, iv fluids, and antipyretics. She had no clinical improvement for 3 days.

Her ascitic fluid analysis was:

Proteins- 4.7 g/dl,
Glucose- 43 mg/dl
Albumin- 1.7 g/dl
Total cell count- 1,800 cells
Neutrophils- 40%
Lymphocytes- 60%
Adenosine deaminase – 68 U/L (normal- up to 40 u/l)

Ascitic fluid:

- gram staining- plenty of lymphocytes, no organisms were seen.
- AFB staining- negative.
- Ascitic fluid CBNAAT for tb- Mycobacterium Tuberculosis bacilli detected, no rifampicin resistance detected.
- Negative for malignant cells.

Her serum albumin -2.6 g/dl ; SAAG (serum ascites albumin gradient)- <1.1, signifying exudate of non-portal hypertensive etiology.

Mantoux test- 25mm.

HRCT chest:

- Bilateral minimal pleural effusion.
- Few centrilobular nodules noted in the apical posterior segment of right upper lobe. -f/s/o infective etiology.

CECT abdomen: moderate to severe ascites with enhancing peritoneal thickening along the anterior abdominal wall -f/s/o infective etiology.

She was started on first-line ATT drugs isoniazid, rifampicin, ethambutol, pyrazinamide as per category -I of RNTCP. Her baby was given BCG vaccine at birth. The baby was negative for the Mantoux test; his chest x-ray was normal. Breastfeeding was continued. The

baby was started on isoniazid prophylaxis @ 10 mg/kg weight for 3 months.

DISCUSSION:

Tuberculosis of peritoneum is a very rare cause of puerperal fever. Tuberculosis presenting without typical symptoms of productive cough will be difficult to diagnose in the peripartum period. As in this case, there was no productive cough; patient had a high-grade fever. Ascitic fluid analysis showing high proteins and low SAAG is suggestive of exudate of non-portal hypertensive etiology. ADA levels 68 u/l (> 40u/l), ascitic fluid CBNAAT positive for MTB. Mantoux test -25mm, all of these were suggestive of tb abdomen. It was confirmed by CECT abdomen as tb peritoneum, with tb focus also in the apical posterior segment of the right upper lobe of lungs on HRCT. Peritoneal involvement is usually due to hematogenous spread, although rarely it can occur following the rupture of a tuberculous intra-abdominal lymph node. TB Peritonitis is of 3 types - Wet type, dry type, fibrotic type. This case is an example of a wet type of tb peritonitis. Pregnancy suppresses the T-helper 1 (Th1) proinflammatory response, which may mask symptoms while increasing susceptibility to new infection and reactivation of tuberculosis¹⁻². After delivery, Th1 suppression reverses—similar to immune reconstitution syndrome in HIV patients starting antiretroviral therapy (ART)—and symptoms are exacerbated³. A large study recently found that early postpartum women are twice as likely to develop tuberculosis as nonpregnant women⁴. All first-line ATT drugs except streptomycin are safe in pregnancy.

CONCLUSION:

Practitioners should be cognizant of the unpredictable symptomatology of tuberculosis during pregnancy. Tb should always be considered in the differential diagnosis of puerperal fever.

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