

Dilemma in Diagnosis of Tuberculosis and a Case Report of Lost a Battle of TB

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ABSTRACT

Introduction: Pregnant individuals are especially difficult to diagnose because many symptoms of active TB can mimic normal physiological changes of pregnancy.

Case report: A 26 year old primigravida at 33 weeks period of gestation presented with complaints of breathlessness for 2 days and fever on and off for 2 months. Per abdominal examination revealed uterus was 30 weeks size and FHS was regular. There was no past history of tuberculosis in patient or family. X-ray chest showed bilateral lung infiltrates (? tuberculosis), however her sputum for AFB was negative. On day 2 of admission, she was having high grade fever and respiratory rate of 34 per minute. Her oxygen saturation had dropped to 70%. So, patient was intubated and shifted to ICU. Her cesarean section was done. There was clinical worsening and she succumbed to her illness on day 5 of cesarean section.

Conclusion: Our case emphasizes that a high degree of clinical awareness is essential to diagnose TB in pregnancy.

Keywords: Tuberculosis, Intensive Care Unit, Pneumothorax

INTRODUCTION

In spite of having effective therapy against Tuberculosis (TB), it affects millions of people across the world. The World Health Organization (WHO) estimated that there were 9.6 million new TB cases globally in 2014. Of these incident TB cases, 3.2 million occurred in women, with 480,000 estimated TB deaths.¹ Pregnant individuals are especially difficult to diagnose because many symptoms of active TB can mimic normal physiological changes of pregnancy. Early diagnosis of TB infection and disease in pregnant women is key to better health outcome for both mother and infant.²

CASE PRESENTATION

A 26 year old primigravida female at 33 weeks period of gestation presented with complaints of breathlessness for 2 days and fever on and off for 2 months. On examination she was conscious, oriented, febrile to touch, tachypnea with respiratory rate of 24/min, pulse of 92/min and temperature of 100 °F, BP was 120/ 82mmHg. Oxygen saturation was 97%. Systemic examination revealed bilateral rhonchi and fine crepitations in the lungs. On per abdominal examination, uterus was 30 weeks size and fetal heart rate was regular. There was no past history of tuberculosis in patient or family history of tuberculosis. Patient was empirically started on intravenous Amoxy-clav 1.2 gm i.v. Initial laboratory investigations were as follows: haemoglobin-8.8 gm/dL, total leucocyte count was 11,000/mm³ with 83% polymorphs and 11% lymphocytes. Erythrocyte sedimentation rate was 26.6 mm fall first hour. Liver and renal function tests were

within normal limits. Widal test for enteric fever, peripheral smear for malarial parasite, and urine and blood culture were not contributory. Sputum for AFB smear was also negative. On day 2 of admission, she was having high grade fever and respiratory rate of 34 per minute. Her oxygen saturation had dropped to 70%. So, patient was kept on medisyms with intubation, as ICU bed was not available. On day 3, patient was shifted to ICU and put on ventilator. Her chest X ray showed areas of fluffy consolidation in bilateral upper and middle zone (Fig. 1 and Fig. 2). Antitubercular therapy was also started in view of clinical and radiological suspicion. Her BP was falling, so she was started on vasopressor and hydrocortisone. On day 5 of ICU admission, vasopressor was stopped, but she could not tolerate weaning of ventilator. So, decision for cesarean section was taken in view of betterment of her condition. So, her cesarean section was done on day 5 of ICU admission. A baby of female sex of 1.2 kg was delivered and admitted in NICU in view of prematurity. Baby's chest X-ray was normal. However baby developed jaundice and died on day 8 due to sepsis. On day 2 of cesarean section, patient developed bilateral pneumothorax and was not maintaining vitals. Intercostal drain was inserted and she was started on ionotrops. However, there was clinical worsening and she succumbed to her illness on day 5 of cesarean section.

DISCUSSION

Tuberculosis (TB) is still a major public health problem. Tuberculosis is being increasingly recognized as a cause of respiratory distress. Today, the world still faces an annual rate of 90 lakhs new TB cases and 20 lakhs TB deaths. Pregnancy is an immunocompromised state, so any latent infection can become active during that period.³ The diagnosis of perinatal TB is difficult, symptoms may be non-specific or mimic normal physiologic changes of pregnancy. Miliary TB can occur also as a late event in untreated patients, pregnant woman and patients with underlying diseases. Pleural effusion, peritonitis or meningitis can also

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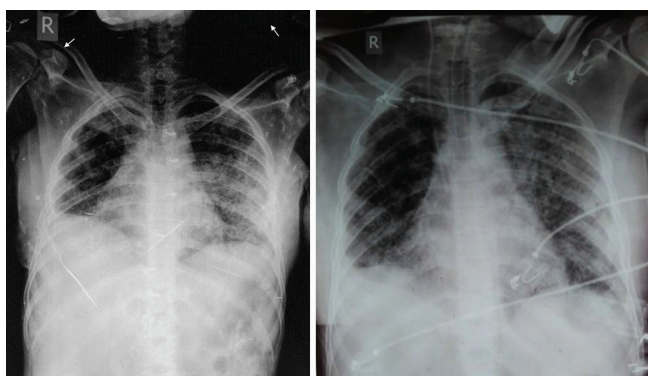


Figure-1: Bilateral infiltrates seen in lung fields; **Figure-2:** After intubation more prominent infiltration seen in left lung

be observed in as many as 66% of these cases.⁴ Clinical manifestations of miliary tuberculosis are non-specific. Miliary tuberculosis continues a perplexing disease making its diagnosis and treatment difficult due to its variable clinical presentation, atypical radiological findings and difficulties in establishing tuberculosis as the aetiological diagnosis. So a high degree of clinical suspicion and a systematic approach to diagnostic testing is required to establish the diagnosis of miliary tuberculosis.⁵

Sharma et al. reported that among the 2,733 cases of TB, only 29 cases (1%) developed ARDS.⁶ In patients with delayed diagnosis and significantly deteriorating treatment, Greenaway et al. found that the overall mortality rate was 12%, but reached 40-50% among those who were transferred to ICU, which was considered to be due to delayed clinical management.⁶ In another case series study, the ICU and hospital mortality rates of critically ill patients were 58% and 63%, respectively.⁷ Antitubercular treatment should be initiated early if the suspicion of active disease is moderate to high such as persistent upper lobe infiltrate, cough in a high risk individual, even before result of availability of diagnostic tests as delay in initiation of treatment can lead to death. It can be speculated that the patient's disease was overlooked by herself and her family members due to the atypical infection symptoms. The patient was sent to our hospital when her condition became worse. Soon after admission, the patient developed acute respiratory distress symptoms, which did not improve after potent anti-infection or TB treatment. Ultimately, all efforts to revive her were futile. The patient did not receive CT examination and his family members refused an autopsy after his death, so we are unable to further clarify whether there was an infection of extrapulmonary TB.

Active TB in pregnancy is associated with increased fetal risks including prematurity, low birth weight, growth retardation, and low Apgar scores.^{8,9} Our patient delivered a preterm infant of 1.6 kg, who was shifted to NICU in view of prematurity.

CONCLUSION

Our case emphasizes that a high degree of clinical awareness is essential to diagnose TB in pregnancy and the postpartum period.

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