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Common Disease Uncommon Manifestations… Varied Presentations of Tuberculosis In Pregnancy

Medical Science

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Dr. Siddesh M Iyer	SMC OBGY, HBT Medical College And Dr. R.N. Cooper Municipal Hospital , Mumbai
Dr. Reena J Wani	Additional Prof. OBGY, HBT Medical College And Dr. R.N. Cooper Municipal Hospital , Mumbai
Dr. Rashmi Jalvee	Assitant Prof. OBGY, HBT Medical College And Dr. R.N. Cooper Municipal Hospital , Mumbai
Dr Yatin Shah	HBT Medical College And Dr. R.N. Cooper Municipal Hospital , Mumbai
Dr. Ganesh Shinde	Prof And HOD OBGY, HBT Medical College And Dr. R.N. Cooper Municipal Hospital , Mumbai

ABSTRACT

Tuberculosis has resurfaced with a renewed vigour as a significant health problem showing resistant forms in the recent times. Although it is often associated with infertility, here we showcase 4 women who presented in pregnancy with cutaneous and atypical manifestations of tuberculosis at a tertiary referral institute over the last 6 months

Introduction:

Pregnancy being a state of relative immune suppression can make pregnant women more susceptible to various infections like tuberculosis[1]. When in the early 19th century, tuberculous patients were thought to be infertile, it is interesting that women are now conceiving with tuberculosis. In 2013 according to the WHO report there were 3.3 million cases of tuberculosis with more than 5 lakh deaths[2]. One third of tuberculosis cases in the world are in India. 4 interesting cases of tuberculosis are discussed below.

Case series

A 30 year old Gravida2 Para1 Living1 presented to outpatient department at 3 months gestation with a lesion on the right knee This lesion was small initially (2x2 cms) but had increased to its present size of 5x5 cms. On examination she was averagely built and nourished, her height was 155 cms and she weighed 60 kgs. Her vitals were stable and she was corresponding per abdomen. She was advised skin and a surgery reference. Her lesion was biopsied which showed granulomatous inflammation suggestive of lupus vulgaris. She was put on category 1AKT (HRZE).The lesion did not increase any further and showed signs of regression. She went into spontaneous labor and was admitted at term gestation. She delivered a male child of 2.8 kgs. The baby had multiple congenital anomalies which included cleft lip and palate, polydactyly and anorectal atresia. She was discharged on day 2 with advice to continue AKT. The lesion has subsided since then.

A 25 year old Gravida2 Para1 Living1 referred from a nearby maternity home at 8 months gestation with leaking per vaginam. There was no other complaint. She had history of fever on and off in antenatal period. On examination she was poorly built and nourished. Her height was 150 cms and she weighed 38 kgs. She was afebrile and vitally stable. Her chest was clear and on per abdomen she was 32weeks breech presentation with regular fetal heart and in early labor. She was 2 cms dilated on per vaginam, 50 % effaced breech presentation, and leak present, station 3. She was taken up for an emergency LSCS for preterm breech with prom after giving a shot of steroid. She delivered a female child 1.6 kgs. The surgery was uneventful. However she started having high grade fever in the post operative period on day 2. Fever profile was normal. Her X ray and HRCT were suggestive of military tuberculosis. She was started on category 1 AKT(HRZE). She showed rapid improvement after starting AKT . Baby was in NICU for preterm birth and was started on INH prophylaxis. Both mother and baby were discharged after a month in a stable condition

A 30 year old Gravida3 Para2 Living2 referred at 40 weeks 5 days from a nearby maternity home for post dated pregnancy with a neck swelling. The swelling was initially small (1x1 cms) and had gradually increased to present size (7x5cms). She had no fever, weight loss and no major medical or surgical illness. On examination she was averagely built and nourished. Her height was 155 cms and she weighed 60 kgs. She was vitally stable. Local examination: Left submandibular swelling of 7x5 cms , non tender. USG neck was suggestive of a lymph nodal swelling. A surgery reference was taken and FNAC was done which was suggestive of tuberculous lymphadenitis. She was started on cat 1 AKT. She went into spontaneous labor and delivered a male child of 3 kgs. Baby was in NICU for weak cry with meconium stained liquor. Patient was discharged on day 10 after baby was discharged with advice to continue AKT and follow up regularly.

A 26 year old Gravida2Para1Living1 with 39 weeks came with pain in abdomen since 2 days and had cough and breathlessness on and off since 1 week. She had history of tuberculosis 2 years back for which she took treatment from a private hospital for 1.5years.She went into spontaneous labor and delivered a male child of 2.4 kgs. Post delivery she was investigated for her cough and breathlessness. Her sputum AFB was positive for tuberculosis and X Ray was suggestive of tuberculosis. HRCT was confirmatory of the diagnosis. She was started on AKT Cat 2. The baby was put on INH prophylaxis and the patient was transferred to an infectious disease hospital.

DISCUSSION:

The symptoms of tuberculosis such as malaise, low-grade fever and fatigue can overlap the symptoms of preganacy.[3] The most common site in pregnancy is pulmonary. Maternal and fetal outcomes in pregnancy vary with the site of

the tuberculosis and the timing of diagnosis in relation to delivery. In those with a late diagnosis, obstetric morbidity is increased fourfold and preterm labor ninefold.[4] A higher frequency of abortion, toxemia, and intrapartum complications have been reported.[5]

Tuberculosis is second only to HIV in causes of death by infectious diseases among adults. Global prevalence of tuberculosis is 2.5million cases[1]. It mainly affects the lungs and incidence of pulmonary tuberculosis is 176 new cases per 100000 population[6] .The incidence in pregnant women is 18-29/100000 [7]MDR TB is seen in 2-3% new cases and 12-17 % re-treatment cases

Women with tuberculosis in pregnancy and sometimes the attending physicians tend to postpone having chest radiography which complicates the diagnosis even further X-Ray chest, which is a simple investigation, does not carry much harm to the fetus and can help in the diagnosis.

Other forms such as lymphadenitis and cutaneous tuberculosis have also been seen. Indian studies have reported a prevalence of 0.59% of cutaneous tuberculosis[8]

"LUPUS" means "A hungry wolf" in …….. A rare variant (lupus vulgaris) is a cutaneous post-primary TB occurring in previously sensitized individuals who have a high degree of tuberculin sensitivity, although immunity is low to moderate. In contrast to Western countries, where it is found commonly on the face, in India and other developing nations, it commonly involves the extremities and the buttocks. Lesions occur in normal skin after direct extension from underlying tubercular focus, by lymphatic or hematogenous spread, after primary inoculation, after BCG vaccination or in old scrofuloderma scars.[9] Incidence being 5-6 / 1000 cases. Lupus Vulgaris presents with nodular lesions which finally ulcerate and disfigure the skin. Standard 4 drug AKT is the treatment of choice.

Tuberculous lymphadenitis was known as the kings evil in ……. Incidence is about 5-6 per 1000. It is more often seen in immune compromised patients. Scrofuloderma represents direct extension into the skin from an underlying tubercular focus, most commonly tubercular lymphadenitis or skeletal TB. Cervical lymph nodes are most commonly involved. Scrofuloderma presents relatively early due to higher visibility, more symptoms and the greater number of cases of tubercular lymphadenopathy associated with it. Additionally, consumption of unboiled/unpasteurized milk leading to infection by *M bovis*, in turn, leading to cervical node infection via tonsils, may be one factor in India leading to higher scrofuloderma prevalence rates. FNAC helps in diagnosis

Miliary Tuberculosis is the widespread hematogenous dissemination of *Mycobacterium tuberculosis*. Classic miliary TB is defined as millet like (mean, 2 mm; range, 1-5 mm) seeding of TB bacilli in the lung, as evidenced on chest radiography. This pattern is seen in 1-3% of all TB cases.[10] It is the most severe form of tuberculosis , with progressive symptoms over months and has a very high mortality Lungs , liver , spleen , brain. Early diagnosis and treatment can prevent mortality .

Treatment is per National Guidelines. (TABLE)

Short course chemotherapy trials have shown that 6 month regimens of rifampicin isoniazid, pyrazinamide and ethambutol followed by 2 months rifampicin and isoniazid is the treatment of choice for tuberculosis. However drug resistance is becoming highly common and the therapy has to individualized.

Conclusion

Maternal and fetal outcomes in pregnancy vary with the site of the tuberculosis and the timing of diagnosis in relation to delivery. Tuberculosis can present in other forms, not necessarily as pulmonary TB. A simple investigation like X-Ray will help in clinching the diagnosis in pulmonary tuberculosis. One should be ready to carry out procedures, biopsies as per case requirement. Chemotherapy should be as per National guidelines, and the therapy should be completed with multi-disciplinary approach. A high index of suspicion and early diagnosis is needed to reduce obstetric morbidity and mortality.

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