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Original Research Article

Prevalence of tuberculosis infection among pregnant women coming to the OPD of the gynecology department

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Abstract: Tuberculosis is most common during a woman's generative years and is a chief cause of maternal–child mortality. Tuberculosis (TB) remains a fundamental infection in women globally. Therefore the screening of the pregnant women should be done. The present study was planned to study the prevalence of tuberculosis infection among pregnant women. The study was done in the gynecology department among the pregnant women coming to the OPD. The study was done over a period of one year. The patients initially undergo a standardized structured symptom and sign screen and only the patients having positive signs and symptoms were undergone the screening tests. A total of 233 pregnant patients have been visited to the OPD of the gynecology department. Out of these, 9 pregnant women were found to be positive for the pulmonary tuberculosis. Among these 9 females, 4 were found to be HIV positive. It is important to make an early diagnosis of tuberculosis infection and disease in a pregnant woman. If tuberculosis is diagnosed and treated appropriately, the prognosis for both mother and child can be improved.
Keywords: Tuberculosis, Pregnancy, Women

INTRODUCTION:

Tuberculosis is caused by Mycobacterium Tuberculi and commonly causes pulmonary disease. Extra-pulmonary disease like Gastro-intestinal TB can give rise to diagnostic dilemmas as symptoms can be non-specific and establish considerable overlap with other more common conditions and this applies particularly in pregnancy [1]. Tuberculosis remains a significant infection in women globally. It is accountable for 700000 deaths annually and is a major contributor to maternal mortality. Mycobacterium tuberculosis/HIV co-infection is common in areas of high HIV prevalence, and may be associated with significant perinatal and maternal morbidity. Improved diagnosis and treatment of TB in pregnant women are important interventions for both maternal and child health [2].

Lack of awareness is a barrier to diagnosis in low-burden countries. In high-burden countries, healthcare workers often lack diagnostic tests, relying on clinical presentation [3]. Therefore the screening of the pregnant women should be done. The present study was planned to study the prevalence of tuberculosis infection among pregnant women.

MATERIALS AND METHODS:

The study was done in the gynecology department among the pregnant women coming to the OPD. The study was done over a period of one year. The patients initially undergo a standardized structured symptom and sign screen and only the patients having positive signs and symptoms were undergone tuberculin skin test (mantoux), single view posterior anterior dose regulated chest radiograph (CXR) performed after the first trimester and sputum smear and cultures when cough was present. Approval of the ethical committee and informed consent was taken from all the participants.

RESULTS:

A total of 233 pregnant patients have been visited to the OPD of the gynecology department. Out of these, 9 pregnant women were found to be positive for the pulmonary tuberculosis. Among these 9 females, 4 were found to be HIV positive.

DISCUSSION:

TB is the third leading cause of death among women aged 15–44 years. TB can cause infertility and contributes to poor reproductive health outcomes [4]. Prenatal care could be a very good opportunity for TB screening and diagnosis and for following up TB care, especially for women who have limited access to health services, such as migrants or women of limited social/economic status, who only approach medical services when pregnant [4, 5].

The usual diagnostic modalities—sputum microscopy for acid-fast bacilli, culture of sputum and other specimens for M. tuberculosis and chest radiography—remain the mainstay of diagnosis. The tuberculin skin test is of value in the diagnosis of latent TB infection, except in areas in which there is a high prevalence and incidence of TB [2].

When pregnant women contract TB, the disease is more difficult to diagnose because TB symptoms such as fatigue, shortness of breath, sweating, tiredness, cough, and mild fever are similar to physiological symptoms of pregnancy. Untreated TB or TB treated late may lead to severe consequences affecting both mother and child. Pregnant women with pulmonary TB who are treated appropriately do not have increased rates of maternal or neonatal complications, while without treatment, TB can lead to increased neonatal morbidity, low birth weight, prematurity, and increased pregnancy complications, including four-fold increases in maternal morbidity due to higher rates of abortion, post-partum hemorrhage, labor difficulties, and pre-eclampsia [4].

The development of TB disease has been linked to increased HIV replication and reduced CD4 cell counts, contributing to the progression of HIV infection. On the other hand, the immunodeficiency induced by HIV leads to increased rates of TB infection if exposed and increased rates of TB disease once infected. HIV is associated with a 20-fold increased risk of reactivation of latent TB infection (LTBI). HIV infection and TB during pregnancy are a particularly deadly combination and are independent risk factors for maternal mortality [6, 7].

Some major controversial issues in TB care during pregnancy remain that require further research, such as the safety, reliability, and feasibility of TB screening methods used in the prenatal period, drug therapy for pregnant MDR women, and delay of treatment until the post-partum period in case of latent tuberculosis infection (LTBI) [4]. It is recommended that in pregnant women with positive tuberculin test, therapy with INH should be delayed until after delivery if the chest radiograph is normal. However, in certain situations it is advisable to give INH prophylaxis during pregnancy. These include:-

(a) Recent converters: If there is documented tuberculin conversion within preceding two years. This is based on the fact that chances of a person with tuberculin conversion developing active tuberculosis are maximum during the first two years.

(b) Close contacts of person with active tuberculosis.

(c) If the woman is immunocompromised (e.g., HIV seropositivity) [8].

It is important to make an early diagnosis of tuberculosis infection and disease in a pregnant woman. Tuberculosis in pregnancy is as common as in the non-pregnant women. Better results are obtained in women known to have tuberculosis before the onset of pregnancy and who have been treated, as compared to untreated patients with active tuberculosis. The poorest results have been shown to occur in patients in whom tuberculosis is first discovered in the puerperium, since it has been unsuspected and untreated during pregnancy and the disease is generally well advanced. If tuberculosis is diagnosed and treated appropriately, the prognosis for both mother and child is excellent [8].

The diagnosis of tuberculosis (TB) in pregnancy is of utmost importance to both the mother and the fetus since untreated disease carries much greater risk to both. TB is a major health problem all over the world. One third of the world's population and approximately 50% of Indian adults are infected with Mycobacterium tuberculosis. It is expected that the incidence of tuberculosis among pregnant women would be as high as in general population. Considering the high prevalence of this disease in many developing countries including India, a large number of pregnant women can be expected to suffer from TB. The clinical and laboratory diagnosis, and therapy during pregnancy and post-partum period, deserve special attention. Also untreated pulmonary tuberculosis in pregnant women would be a definite risk for transmission of disease to the new born [8].

CONCLUSION:

Improved diagnosis and treatment of TB in pregnant women are important interventions for both maternal and child health. It is important to make an early diagnosis of tuberculosis infection and disease in a pregnant woman. If tuberculosis is diagnosed and treated appropriately, the prognosis for both mother and child can be excellent.

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