

## **Tuberculosis in Pregnancy**

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Diagnosis and management of tuberculosis in pregnancy is a very complex and difficult problem. There are multiple management issues involved in this condition. The diagnosis is usually delayed in developed countries because it is not suspected. However, in countries where there are poor health facilities tuberculosis is a common problem. Migrant population who come from susceptible communities and Aboriginal population are often missed in spite of screening at the time of admission.

It is often necessary to distinguish clinically from neonatal or congenital infections. Very often patients present with chest infections and this is attributed to the general infective conditions. The clinician will have to look into the possibility of hepatosplenomegaly, lymphadenopathy, respiratory distress and fever. A chest radiography is probably the simplest way of screening the tuberculosis in the mother. Some of the other tests for congenital tuberculosis is an abdominal ultrasound, lumbar puncture and sometimes even a gastric aspirate may be useful. If these are proved positive immediate treatment should be instituted. The first line of treatment is isoniazid, rifampin and pyrazinamide. In some of the conditions the patients the organisms may be resistant to Isoniazid and then this should be replaced by ethambutol.

The pulmonary tuberculosis is the most common method of presentation. Tuberculous meningitis and spinal tuberculosis should be also excluded. Very often tuberculous meningitis in the mothers can produce severe neurological problems and this might be attributed to other kinds of problems. A lumbar puncture would be very necessary. Spinal tuberculosis is usually secondary to pulmonary tuberculosis. Patients start complaining of back pain. Very often the back pain is attributable to the advanced pregnancy. Therefore, a plain x-ray of the lumbar spine is necessary. In my opinion this is safe and cannot be postponed. I do not believe a CT scan and an MRI are essential to diagnose a tuberculosis of the spine if a careful evaluation of the radiology is done.

Small concentrations of the drugs are excreted in the breast milk. However, this is not a contra indication for breast feeding. Generally, the babies do not have toxicity due to the excretion of tuberculosis antibiotics in the breast milk. If the infants are born to mothers with tuberculosis during the pregnancy the infants require diagnosis and if this is confirmed they need standardised multi-treatment for at least six months. The dosage of course would depend upon the body weight of the infant. If the mother is already undergoing treatment for pulmonary tuberculosis the prophylactic anti-tubercular treatment for the infant is not necessary. However, if the mother has genital tuberculosis then the infant would require prophylactic treatment.

The effects of tuberculosis on pregnancy is multiple. This is often associated with the risk of spontaneous abortion, pre-natal mortality and small gestation of size and low birth weight. The outcome is normally unfavourable if there is a delay in the treatment. If the maternal spread of tuberculosis through the placenta is not a very common problem. This is often difficult to diagnose type of congenital infections.

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The medical management of the mother will depend upon the first line of treatment which isoniazid, pyrazinamide and rifampin and ethambutol depending upon the sensitivity. The second line of treatment is amikacin.

One of the significant problems with tuberculosis during pregnancy is complaints of back pain. This is also attributed to normal pregnancy and investigations are delayed. A simple plain x ray is safe in the later stages of pregnancy. This will give an idea of about the possible diagnosis of tuberculosis. Anti-tubercular treatment is acceptable if the tuberculosis is suspected. If the spinal condition is due to tuberculosis within three to four weeks of anti-tubercular treatment there is a spectacular improvement in the condition. Advanced examinations are not necessary and sometimes it is not possible in less developed countries. A diagnostic management of tuberculosis is acceptable as this will avoid very difficult diagnostic procedures particularly in situations where health facilities are not up to the mark.

As far as the risk to the pregnant woman and her baby with tuberculosis is considered, the babies born to women with untreated tuberculosis may have serious issues. Mortality among the babies is also high if the mother's tuberculosis has not been diagnosed and therefore not treated. However, this is not a big problem if the mother is already on treatment.

The signs and symptoms of chest pain, fever, cough, back pain, night sweats, chills and loss of weight should be considered particularly in the community where the tuberculosis is highly prevalent. Untreated tuberculosis in the mother the babies have a higher risk of early mortality. It can also cause early miscarriage and maternal death particularly if the mother is infected with HIV. The awareness of tuberculosis in pregnancy is essential to diagnose and treat the condition early particularly in communities and in societies where the primary health is poor. In short the awareness of the possibility of tuberculosis is necessary to diagnose these early. To delay the diagnosis will end up in mortality to the infant and also to the mother.