MSHC
MELBOURNE SEXUAL HEALTH CENTRE

Syphilis in pregnancy treatment guidelines

Syphilis is a bacterial STI and can be passed from mother to foetus during pregnancy.

Causes

- Most congenital syphilis results from in utero rather than intrapartum transmission.
- The risk of fetal infection rises as pregnancy progresses, particularly beyond 18 weeks: 26% if treated by 24 weeks and 60% if not treated until the third trimester.
- Risk also increases with higher RPR titres.
- Risk to the fetus is greatest with primary and secondary syphilis and with latent infection of up to four years duration.
- If syphilis in pregnancy is untreated, the overall rate of stillbirth or prematurity is around 50%, with congenital syphilis in about half the remainder.
- If maternal syphilitic lesions are present at the time of delivery the infection will be transmitted to the baby.
- Untreated late latent syphilis leads to congenital syphilis in 2-10% of cases, with increased risk of perinatal death of around 10 times the background rate.

Risk factors

Pregnant women should be screened for syphilis and re-screened later in pregnancy if at risk for infection later in pregnancy.

Clinical presentation

Syphilis in pregnancy results in very high rates of fetal morbidity and mortality and should be treated as soon as practical after diagnosis.

Repeat syphilis testing is recommended at 28 to 32 weeks of pregnancy, and at delivery, in all women at risk of sexually transmissible infections, and in all women presenting with signs or symptoms of any other sexually transmissible infection.

Diagnosis

Test	Site/ specimen	Comments
PCR	Lesion swabs	Highly sensitive and specific

Test	Site/ specimen	Comments
Serology	Blood	Specific treponemal antibody tests include immunoassays (EIA or CLIA) and agglutination assays (TPPA/TPHA). These are almost always positive at the time of presentation of primary chancres (but the RPR is negative in around 30% of such cases). Specific treponemal tests generally remain positive for life after treatment, though cases of primary syphilis treated very early can lose all serological markers. Non-reactive specific treponemal antibody tests 3 months after possible exposure excludes syphilis infection.

Management

Index patient: pregnant woman

Syphilis is notifiable to the Victorian Department of Health

Ensure the patient is not lost to follow up, with involvement of contact tracers if required.

Condition	Recommended	Comments
Primary or secondary or early latent syphilis in pregnancy	**Benzathine penicillin G (2.4 Million Units) IM, stat**	Penicillin is the only recommended treatment in pregnancy. Alternatives to penicillin are either contraindicated in pregnancy (doxycycline) or unproven (ceftriaxone) or ineffective (azithromycin). **Benzyl penicillin (short-acting) is not the correct treatment for syphilis.** IM Benzathine Penicillin can be accessed free of charge through the '**Doctors Bag**' (Prescriber bag) in Primary care clinics to allow for immediate treatment of individuals diagnosed with syphilis or presenting as contacts of syphilis.- The Jarisch-Herxheimer reaction can occur in pregnant women especially those with primary or secondary syphilis. In those who experience a reaction, contractions, decreased fetal movements or fetal distress on monitoring may occur. However, the US CDC guidelines report premature delivery with a Jarisch-Herxheimer reaction as rare: “Women treated for syphilis during the second half of pregnancy are at risk for premature labor and/or fetal distress, if the treatment precipitates the Jarisch-Herxheimer reaction. These women should be advised to seek obstetric attention after treatment, if they notice any contractions or decrease in fetal movements. Stillbirth is a rare complication of treatment, but concern for this complication should not delay necessary treatment.”
Late latent syphilis (>2 years) or syphilis of unknown duration	**Benzathine penicillin G (2.4 Million Units) IM, 3 doses given at weekly intervals**	If a dose is missed for more than 14 days, the full three-dose course of treatment should be re-started

Penicillin allergy

- Penicillin-allergic pregnant women with syphilis pose additional management problems and should be managed in consultation with an Infectious Disease specialist.
- These women will be considered for oral penicillin desensitisation and subsequent IM benzathine penicillin treatment.
- Penicillin desensitisation carries a 3% risk of anaphylaxis. Both anaphylaxis and its treatment may have deleterious effects on uterine blood flow that could lead to premature delivery. Penicillin desensitisation and immediate treatment is safer than delaying treatment or avoiding penicillin.
- Consider ceftriaxone only if there is a concern that the patient may not follow-through with the recommendation to desensitise.
- In practice, treatment for syphilis in pregnancy is most common for latent infection of unknown duration often in women with low or non-reactive RPR titres and where there is no documented history of previous syphilis treatment prior to pregnancy. These are cases with a lower risk of congenital syphilis, where the risk of prematurity induced by anaphylaxis might be relevant.
- The Infectious Disease specialist may consider delaying desensitisation for a mother with a history of probable treated syphilis, RPR < 4, and a serious penicillin allergy. One would need to balance the risk of a serious outcome from anaphylaxis against the risk that she has not in fact been treated. If in doubt, the conventional approach is to treat early.

Management of the newborn

- Refer to the detailed information in the Australasian society for infectious diseases guidelines.
- All babies born to women with reactive syphilis serology should be examined for evidence of congenital syphilis by a paediatrician.
- All babies born to mothers diagnosed with syphilis in pregnancy will require follow up and testing overseen by a specialist paediatric clinic such as those at the Royal Children's Hospital or the Monash Children's hospital.
- All cases of syphilis in pregnancy require close cooperation between GPs, laboratories, and specialist clinics to ensure women and their babies are treated appropriately and not lost to follow-up. The Department's Partner Notification Officers can assist with cases lost to follow up.
- Further assessment and management depends upon the newborn's investigation results and the timing of treatment of the mother.
- The baby may still be infected if the mother is treated in the third trimester.
- Babies infected in late pregnancy may have negative serology at birth.
- For the newborn whose mother was treated during pregnancy, but at least a month before delivery, and whose RPR is less than 4 times the mother's RPR, a single dose of benzathine penicillin 50,000 U/kg is recommended.

Contact tracing & partner management

- Involve Partner Notification Officers-for partner notification. Partners must be contacted, tested and offered treatment with a single dose of 1.8 g of benzathine penicillin without waiting for the results of serology which can be negative in early infection.
- Contacts who are penicillin allergic can be treated with doxycycline 100 mg, twice daily for 2 weeks.
- Individuals should abstain from sex with their partners until seven days after both have received treatment.

Disclaimer

We recognise that gender identity is fluid. In our treatment guidelines, the words and language we use to describe genitals and gender are based on the sex assigned at birth.

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