transmission cannot be completely prevented. Therefore, routine care of women in the reproductive age group should include contraception to prevent unplanned pregnancies, as well as voluntary counselling and testing before planning a pregnancy.

References available on request.

SYPHILIS IN PREGNANCY

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Aetiology and epidemiology

Syphilis, a chronic systemic infection, is predominantly sexually transmitted and caused by the spirochaete *Treponema pallidum*.[1] Prevalence rates in women exceed 10% in parts of sub-Saharan Africa.[2] Locally, an incidence of 20% in antenatal patients attending Pelonomi Hospital, Bloemfontein, was found.[3]

A study of antenatal patients at King Edward VIII Hospital, Durban, showed a prevalence of active syphilis of 7.4%.[4] *T. pallidum* is morphologically and serologically indistinguishable from other human pathogenic treponemes, *T. pertenue, T. endemicum* and *T. caratuem*, the causative agents, respectively, of yaws, bejel and pinta.[2] Pregnancy is a critical time to detect and treat syphilis, not only to protect the mother and her partner from its complications, but to prevent the extensive pathological changes that characterise congenital syphilis, and the high perinatal mortality associated with it. Fortunately, of the many congenital infections, syphilis is not only the most readily prevented, it is also the most susceptible to therapy.[5]

Clinical features in the mother

Clinical features of primary syphilis are infrequently seen in pregnancy because the primary chancre, the majority of which occur on the genitalia, may be small and undetectable, modified by treatment or occur on the cervix. Rarely, the lesion is a florid destructive ulcer of the vulva.[6] While the classic description is that of a single, painless, well-defined ulcer that exudes clear serum, multiple lesions may occur and appear as 'kissing chancres' on contiguous surfaces.[2] The lesions may become painful as a result of secondary bacterial infection or co-infection with herpes or chancroid. Inguinal lymphadenopathy, usually discrete, painless and rubbery, may be associated with lesions on the external genitalia and lower third of the vagina. The primary chancre occurs from 9 - 90 days (average 2 - 4 weeks) after the initial contact with the infected person. The primary lesion heals spontaneously in 2 - 6 weeks, leaving a thin atrophic scar or no scar at all. A latent phase lasting for 2 weeks to 6 months may follow.[2]

The lesions seen most commonly in secondary syphilis in pregnancy are condylomata lata which usually occur in the vulval and perianal region and inner thighs. Constitutional symptoms like headache, mild pyrexia, malaise and loss of appetite are usually slight and often unrecognised. Lesions in the throat and larynx may give rise to a sore throat or hoarseness, respectively. Other signs of secondary syphilis are variable and include polymorphous skin eruptions, generalised lymphadenopathy and mouth ulceration.[6]

Early latent syphilis is the stage immediately after spontaneous resolution of the secondary lesions.

Late latent and tertiary syphilis is noncontagious and not associated with a spirochaetaemia, so is unlikely to affect the fetus. However, if serological tests are positive, then the patient must be treated, whatever the stage.[6]

Fetal effects

The fetus may suffer from several complications, viz. abortion, intrauterine death, intrauterine growth retardation or congenital infection. Babies born to mothers with the active stage of disease are at much higher risk of developing the disease. An infant born alive with congenital infection may present with the following features: jaundice, anaemia, hepatosplenomegaly, growth retardation and nasal discharge. A variety of skin lesions (e.g. bullous eruptions) may occur and are particularly located around the mouth, nose and anus. Pseudoparalysis may also appear at birth. The syphilitic placenta appears pale and boggy with a pale yellow maternal surface and friable, greasy cotyledons.[6]

Diagnosis

Screening for syphilis in pregnancy should be a routine antenatal investigation and it is recommended that a repeat investigation be done at 36 weeks of gestation.[7] Serological tests fall into 2 groups — nonspecific and specific tests.

Nonspecific tests

These react to cardiolipins contained in the *Treponema*. They become positive after 10 - 30 days of the initial infection and usually become negative after successful treatment. Common tests include:

- Wassermann reaction (WR)
- Venereal Disease Research Laboratory (VDRL) slide test
- rapid plasma reagin card test.

False positives may be seen with allergies, malaria, tuberculosis, glandular fever, systemic lupus erythematosus, cirrhosis, etc.

Specific tests

These depend on the detection of specific antibodies to pathogenic *Treponema*. The most commonly used are:

- *Treponema pallidum* haemagglutination test (TPHA)
- fluorescent treponemal antibody test (FTA).

These two tests are specific for *T. pallidum* and become positive some 2 weeks after the initial infection. They remain positive once the patient has had the disease.[8]

Treatment

It has been suggested that all women with a positive rapid plasma reagin test be treated.[7] Penicillin is the treatment of choice. Cronjé[3] gives a detailed treatment regimen. (Cronjé HS. *Obstetrics in Southern Africa*.

Pretoria: JL van Schaik, 1996: 278-290.) In penicillin- sensitive patients, the options are desensitisation or erythromycin. If the latter is used, the baby should be treated after delivery as erythromycin diffuses poorly into the fetal circulation.[2] An untoward reaction to treatment is the Jarish-Herxheimer reaction, a transient immunological based reaction which occurs 3 - 12 hours after treatment, usually resolving within 24 hours. Congenital infection is treated by aqueous procaine penicillin parenterally for 10 days or a single dose of benzathine penicillin. If the cerebrospinal fluid is abnormal, the child should be admitted and treated for 10 -15 days.[2]

Follow-up and prevention

Patients should be counselled and sexual intercourse should be avoided until treatment is completed. Screening for other STDs should be offered. If treatment was successful, titres begin to fall by the end of the third month and non-treponemal tests become negative at the end of 1 year. In the event of clinical or serological relapse or seroresistance, retreatment is essential.[2] Avoidance of high-risk behaviour and the use of condoms are the principal measures of prevention. Wherever possible, the consorts of the infected woman should be found and treated. In pregnancy, early detection and prompt treatment will forestall the hazards of congenital infection. Ideally, the tests should be repeated in later pregnancy to detect and treat re-infection. Efficient case treatment at least 1 month before delivery prevents the birth of a congenitally syphilitic child in most cases.

References available on request.