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Syphilis

EBMG
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Contents

This guideline has been extensively revised

Aims

- Suspected syphilis should be verified with the appropriate clinical and serological tests and the patient should be treated with the most efficient antibiotics.
- Syphilis is a dangerous infectious disease that should be prevented and treated effectively.

Aetiology and transmission

- The pathogen is the spirochete Treponema pallidum.
- Easily transmitted by sexual intercourse and also from the mother to the foetus.
- Contagiousness is highest (30 - 60%) in the primary and secondary phases. After 2 years, the patient ceases to spread the disease.

Clinical picture

- Asymptomatic incubation period lasts for 3 - 4 weeks after which two thirds of the patients (not all!) have visible symptoms
    1. Primary symptoms (local infection)
        - An ulcer, the "primary lesion", with a clean, hard base (See Figure 1 of the

corresponding full text guideline available on the EBM Web site) appears in the genital region, sometimes also in anus or the oral region.
        - There is local lymphadenopathy without tenderness.
    2. Secondary stage 6 - 8 weeks after exposure (general infection).
        - **General symptoms** include indisposition, fever and enlarged lymph nodes.
        - Roseola eczema (See Figure 2 of the corresponding full text guideline available on the EBM Web site) resembles widely spread viral eczema or drug eruption.
            - Syphilids, i.e. formations of papules are found in the hands and feet or spread all over the body. May be large, cauliflower-like formations (condylomata latum) around the anus or necrotic in patients with a poor immune response (e.g. HIV).
        - Alopecia syphilitica, typical "moth-eaten" spotty baldness in some patients.
    3. Late symptoms occur in about one third of untreated patients in 10 - 30 years. The most important are neurological (atypical psychosis, paralytic dementia) and vascular symptoms (aortic aneurysm, valvular regurgitation).

Differential diagnosis

- Primary syphilis
    - Genital herpes. Incubation time is short in primary infection, lesions occur in groups and they are painful. Lymphadenopathy is less pronounced, however, the nodes are tender.
    - Ulcus molle (soft chancre)
    - Infected coital or other traumas.
        - Secondary syphilis
    - Roseola may resemble pityriasis rosea, drug eruption, measles (rubeola), German measles (rubella) or scarlet fever (scarlatina).
    - Syphilids may resemble papular lichen ruber planus, psoriasis, scabies or infectious eczema of the feet (e.g. tinea). Condyloma latum may resemble condyloma acuminata.

Diagnosis

1. History of exposure (unprotected sex) and/or clinical picture.
2. Plain specimen. A dark field microscope may reveal spirochetes in lesion discharge and confirm the diagnosis.
3. Serology
    - The cardiolipin test becomes positive 3 - 4 weeks after infection. It is the primary test for screening. High titres (>16) are almost always specific. A low titre is in many cases a false positive result (pregnancy, connective tissue disease, infection) or a serological scar of an earlier treated infection or latent syphilis.
    - TPHA (Treponema pallidum haemagglutination test) is the test of choice for verifying syphilis. The result becomes positive slightly later than that of the cardiolipin test, but it is specific (almost 100%) and suitable for following up response to treatment.
    - FTA-abs (fluorescence test) is a specific syphilis test used in special cases (neurosyphilis, suspicion of neonatal syphilis) as it detects also IgM antibodies.

- Gene amplification methods are already being used for screening.

Treatment

- Procaine penicillin 800 000 IU x 1 i.m. for 12 - 15 days (primary, secondary and latent syphilis), in neurosyphilis i.v. penicillin.
- Ceftriaxone (1 g/day) injection is an alternative to penicillin. Doxicyclin is no longer recommended.

Follow-up and identification of partners

- After antibiotic therapy the cardiolipin and TPHA tests are performed at 3 and 6 months and one year. In primary stage infection the tests become negative in most cases, in other recent infections the titre falls by at least two dilutions when the treatment has be successful.
- All sexual partners who have been exposed to infection should be screened with the cardiolipin test. If the result is negative, the test should be repeated after 3 months.

Related evidence

- Patient assistance at facilitating patient referral and provider referral may increase partner notification for sexually transmitted diseases (Level of Evidence = C; Evidence Summary available on the EBM Web site).
- Penicillin is effective in the treatment of syphilis in pregnancy and in the prevention of congenital syphilis (Level of Evidence = B; Evidence Summary available on the EBM Web site).
- References[1, 2, 3, 4]

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