SYPHILIS

WARNING: SYPHILIS MAY BE A SEXUALLY TRANSMITTED DISEASE; THERE MAY BE SOME GRAPHIC PHOTOGRAPHS

CONTROL OF COMMUNICABLE DISEASES MANUAL, 2004
NAVEDTRA 14295B, HOSPITAL CORPSMAN MANUAL, JAN 2010

WORLD HEALTH ORGANIZATION
UNIFORM CODE OF MILITARY JUSTICE

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FUNDAMENTALS:

• Chain of Transmission; Syphilis, as any other Sexually Transmitted Disease or Infection (STD or STI) may be broken by breaking an of the six links in the chain of transmission.
TYPES:

• I. Venereal Syphilis
  • An acute and chronic treponemal disease characterized clinically by a primary lesion, secondary eruption involving skin and mucous membranes, long periods of latency, and late lesions of skin, bone, viscera, and the CNS and Cardiovascular system.

• II. Non Venereal Syphilis
  • An acute disease of limited geographic distribution, characterized clinically by an eruption of skin and mucous membranes, usually without an evident primary sore.
SYMPTOMS:

I. The primary lesion (Chancre) will usually show within 3 weeks of exposure. The chancre is indurated, painless ulcer with serous exudate at the initial site of contact (invasion). The chancre may be internal such as sites of the rectum or cervix.

II. For Non Venereal Syphilis there is no primary chancre, the most frequent site for outbreak tends to be the mucous membranes of the mouth. Then by moist papules in skinfolds and by drier lesions of the trunk and extremities.
VENEREAL SYPHILIS COURSE:

• Once contact has occurred the bacteria, Treponema, begins to invade the blood stream.
• Next a firm, nonfluctuant, painless satellite lymph node (bubo) commonly flows next.
• Within 3 weeks is the typical incubation period when the initial chancre will be present. But the chancre can be as soon as 10 days through to 3 months before the initial chancre is seen.
• Approximately 4-6 weeks after exposure, the chancre begins to involute and in most cases a generalized secondary eruption appears with mild constitutional symptoms.
• Secondary symptoms resolve spontaneously within weeks up to 12 months.
SECONDARY LESIONS:

- Both Venereal and Non Venereal Syphilis may display secondary lesions
DIAGNOSIS:

• I. Serological testing of Blood, initially with RPR [Rapid Plasma Reagin] or VDRL [Venereal Disease Research Laboratory], if positive on either test, MUST BE CONFIRMED by tests using treponemal antigen [FTA-Abs – Fluorescent Treponemal Antibody Absorbed] or [TPHA – T. Pallidum Hemagglutinating antibody]. Serology test are nonreactive during the early primary stage while chancre is still present.

• I. Darkfield or Phase-contrast exam or FA antibody staining of exudates from lesions or aspirates from lymph nodes if no antibiotic has been administered.

• I. For newborns choose Serum over Cord Blood, Cord Blood produces more false-positives.

• II. Darkfield examinations of lesions during early disease. Serological testing are reactive in early stages but gradually tend towards reversal.
OCCURRENCE:

• I. Wide spread; sexually active 20-29 people. Social factors rather than racial or biological factors. Exposure nearly always occurs during oral*, anal*, and/or vaginal intercourse. Transmission from kissing or fondling children is very rare. Transplacental infection of the fetus during the pregnancy of an infected woman.

• II. Common disease of childhood in localized areas with poor socioeconomic conditions and primitive sanitary and dwelling arrangements. Low level transmission in a few foci in eastern Mediterranean, including the Middle East. Major foci exist in the Sahel region of Africa.

* In accordance with UCMJ (Uniform Code of Military Justice) oral and anal sexual intercourse is prohibited by Article 125.
SUSCEPTIBILITY:
• I & II. Susceptibility is UNIVERSAL.

• I & II. Approximately 30% of contact with a carrier will lead to infection.

INCUBATION PERIOD:
• I. 10 days to 3 months, typically 3 weeks

• II. 2 weeks to 3 months
TREATMENT (UNIVERSAL):

• Prevention; education

• Sex workers and their clients are discouraged from using multiple partners, anonymous partners, and/or casual sexual activity. (Note: Service members are prohibited to use the services of sex workers, violations of Article 82 – Solicitation and/or Article 92 – Failure to obey order or regulation.)

• Report to local health authority. Case report of early and congenital syphilis is required in most countries, Class 2. Laboratories have to report reactive serology and/or positive darkfield examinations in many areas. CONFIDENTIALITY of the individual must be safeguarded.

• Standard (Universal) precautions for all blood and body secretions and patients should refrain from sexual intercourse until treatment is completed and lesions have disappeared. Refrain from sexual encounter from previous partner(s) until they have been treated.
TREATMENT (SPECIFIC):

• I. Long acting Penicillin G (Benzathine Penicillin or Bicillin LA) 2.4million units in a single IM dose on the day that primary, secondary or early latent syphilis is diagnosed.

• I. If allergic to PCN;
  
  • A. Doxycycline 100mg twice/day by mouth for 14 days.
  
  • B. Tetracycline 500mg four times/day by mouth for 14 days.
  
  • C. Erythromycin for early stage Syphilis 500mg four times/day by mouth for 14 days.

• I. Serology testing repeated 3 and 6 months after treatment to ensure adequate treatment has been achieved. If patient is HIV positive testing repeated at 1, 2, and 3 month intervals then continued at 3 month intervals for proper treatment.

• I. For treatment of Late Stage Syphilis, 3 weekly doses of 2.4million units for a total 7.2million units.
SAMPLES OF PRESCRIPTIONS:

DD 1289 – DOD

Primary Treatment for Venereal Syphilis

Penicillin G
2.4 million units
IM x 1

NAVMED 6710/6 – Poly Prescription

Primary Treatment for Neurosyphilis

Penicillin G
2.4 million units
IM x 1
SITES OF IM INJECTIONS:

• Deltoid; center mass.
• Gluteus Maximus; ensure your injection site is in the upper outer quadrant of the buttocks, this prevents sciatic nerve injury.

Z TRACK METHOD:

• Z Track method of inject for deep IM (Intramuscular) injections. Is used to “lock” the medication in the muscle and not allow it to ooze back out. By pulling the muscle away and releasing tension intermittently locks the medication into the muscle.
COMPLICATIONS OF VENEREAL SYPHILIS (LATE):

• Late stage of Venereal Syphilis may migrate into the CNS (Central Nervous System) manifesting as acute syphilitic meningitis. This migration is highly variable from 5-20 years after initial infection. Concurrent diseases of HIV and Syphilis must be diagnosed between neurosyphilis and HIV with CNS symptoms.

• Treatment of neurosyphilis is aqueous crystalline (IV) Penicillin G 18-24million units a day, as 3-4million units IV every 4 hours for 10-14 days. Alternately is Procaine Penicillin 2-4million units IM daily AND Probenecid 500mg by mouth four times a day for 10-14 days.

• Treatment success is determined by CSF (Cerbro-Spinal Fluid) and Serology test every 6 months. Until CSF cell count is normal.
PREGNANCY AND VENEREAL SYPHILIS:

• Fetal infection results in congenital syphilis and occurs with high frequency in untreated early infections of pregnant women. It frequently causes spontaneous abortion or still birth.

• Effects of Venereal Syphilis on baby’s body systems:
  • Preterm delivery
  • Low birth weight
  • Saddlenose
  • Sabre shins (Periostis)
  • Interstitial keratitis
  • Deafness Hutchinson teeth (small wide spread greyish incisors)
  • Asymptomatic, especially in the first few weeks of life
TREATMENT OF CONGENITAL SYPHILIS:

• EARLY CONGENITAL: Aqueous crystalline Penicillin G 50,000 units/kg/dose given IV or IM every 12 hours for the first 7 days of life, then every 8 hours thereafter for 10-14 days.

• LATE CONGENITAL: If CSF is abnormal, treat for neurosyphilis 200,000 units/kg/day of aqueous crystalline Penicillin G at 50,000 units/kg/dose every 4 hours for 10-14 days.
FOLLOW UP FROM CONTACT:

- A fundamental feature of programs for Syphilis is CONTROL.
- Interview of the patient who is infected and their sexual partner(s).
- Stage of disease decides criteria for partner(s) notification:
  - Primary: All sexual contact(s) during the 3 months preceding onset of symptoms.
  - Secondary: All sexual contact(s) during the preceding 6 months.
  - Early Latent: All sexual contact(s) during the preceding 1 year.
  - Late: Marital partners, and children of infected mothers.
  - Congenital: All members of the immediate family.
- All confirmed cases of early syphilis exposure within 90 days should receive treatment.
TERMINOLOGY:

• Aqueous crystalline; IV or IM solution
• Constitutional symptoms; Weight loss, Fevers, Fatigue, and Malaise, Chills, Night Sweats and Decreased appetite
• Darkfield Test; Describes microscopy methods, in both light and electron microscopy, which exclude the unscattered beam from the image. As a result, the field around the specimen is generally dark
• Indurated; Harden ulceration
• Involute; Differential geometry of curves, the shape of the legions change
• Nonfluctuant; stable skin legion
• Papules; Circumscribed, solid elevation of the skin with no visible fluid, up to 1 cm in size.
• Treponemal; describes the spiral-shaped bacteria which leads to Syphilis