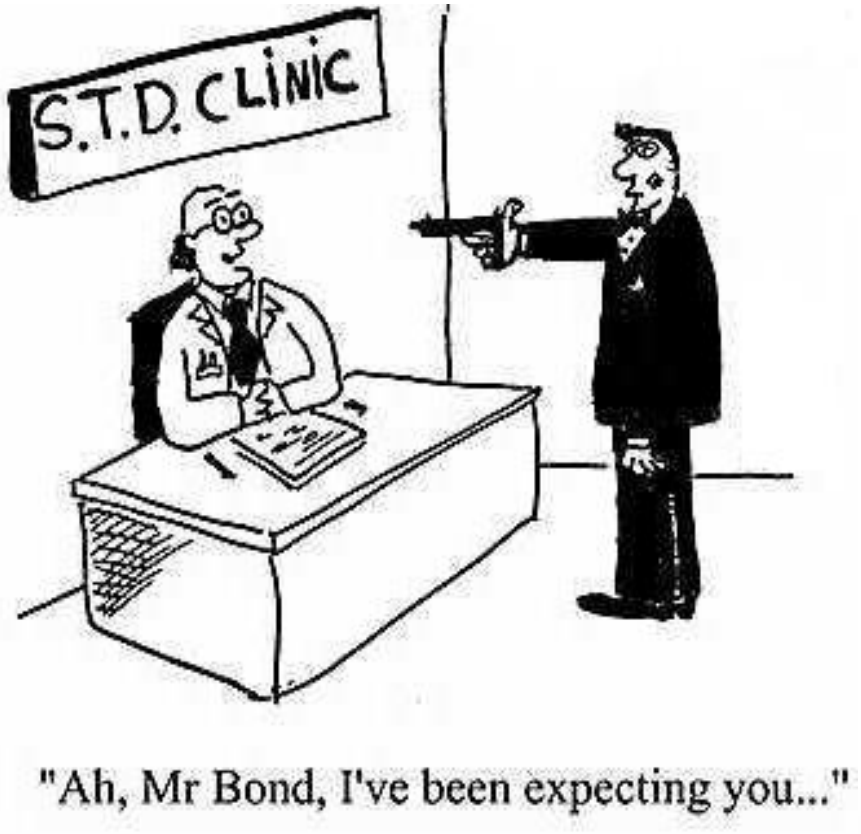
Barnsley Integrated Sexual Health Services

Our Service

- July 2015 – HIV and Sexual health care delivered from Gateway Clinic
- HIV care provided by Barnsley Hospital
- Contraception and STI care provided by Spectrum CIC

GUM Services

- Confidential
- Non judgemental
- Open access
- Onsite diagnosis
- Free treatment



How to refer

- Allow patients to self refer and contact the clinic directly
  - Patient may not make contact
- ‘Phone the clinic to make an appointment.
  - Ask for health advisors if confirmed STI or complex
  - If we have details of reason for referral and patient contact details we will follow-up if they don’t attend
- Refer by letter
  - delay of receiving an appointment.

Contact details

Gateway Clinic

Gateway Plaza

Sackville Street

Barnsley

S70 2RD

Tel: 0800 055 6442

Secure email : **schcic.bishadmin@nhs.net**

Syphilis

Dr Sylvia Bates
Barnsley Integrated Sexual Health
Spectrum CIC

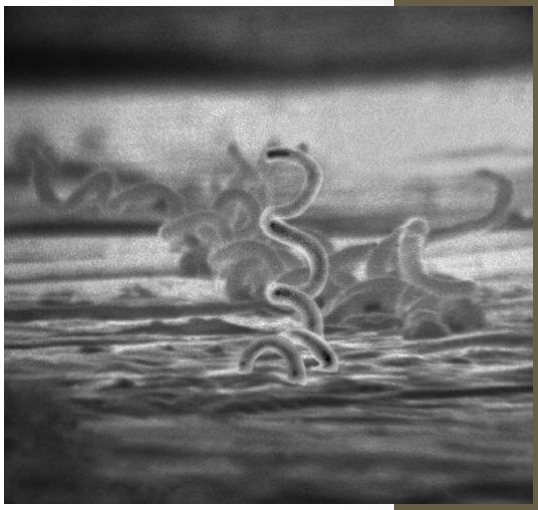
Easy!

- A disease that can have almost any presentation (‘ the great mimicker’) ……..including completely asymptomatic
- With several stages that may be hard to distinguish clinically……..but accurate staging is important for treatment
- With no reliable test to diagnose it (especially recurrent infection)…….and a test that can be falsely negative or positive anyway……..or represent other trep disease
- And something we don’t see that often to gain experience of!

No problem!

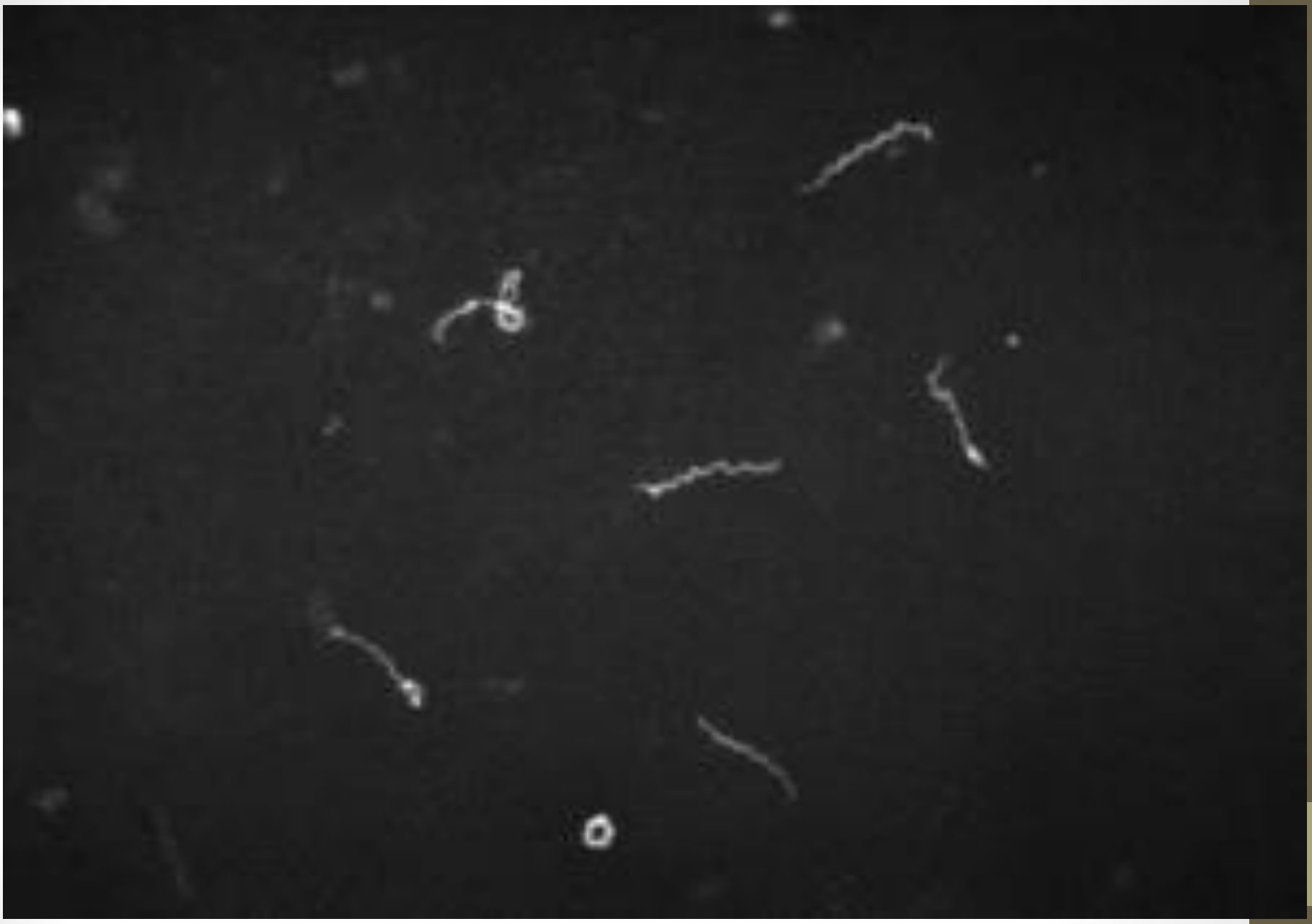
Aetiology

Syphilis is caused by infection with the spirochete bacterium Treponema pallidum subspecies pallidum



Transmission:

- direct contact with an infectious lesion
- trans-placental passage
- Approximately one third of sexual contacts of infectious syphilis will develop the disease (transmission rates of 10–60%)



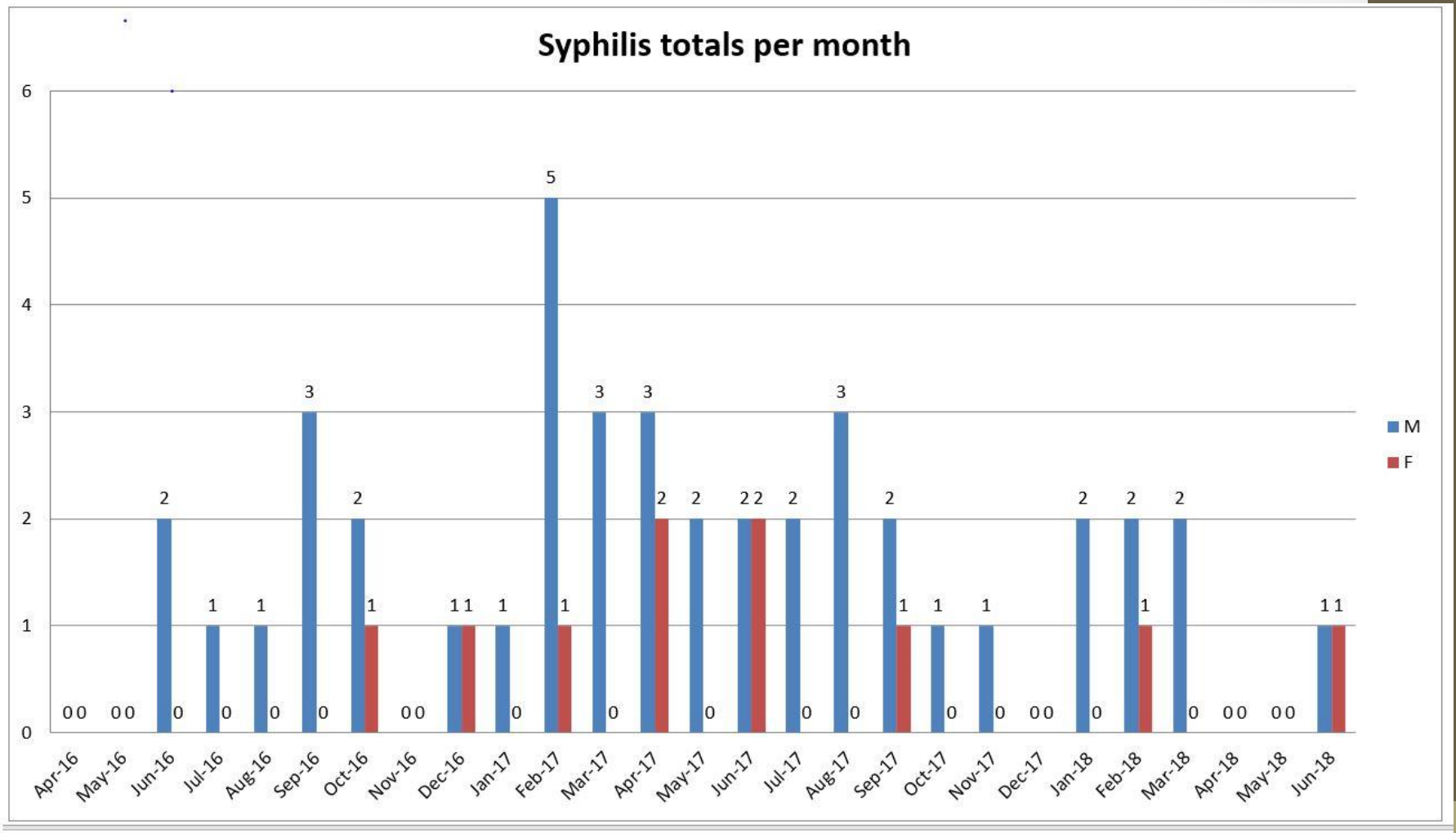
Epidemiology

In 2014:

4317 cases of infectious syphilis, of which 3477 cases were in MSM

This represents a 46% rise among MSM and a 33% rise overall from 2013.

There were 263 cases in women in 2014


Syphilis totals per month
6
5
4
3
2
1
0
M
F
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16
Nov-16
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18

Clinical features

- Syphilis is a multi-stage, multi-system disease

- Primary
- Secondary
- Early Latent
- Late latent
- Tertiary

Primary Syphilis

Chancre and regional lymphadenopathy.

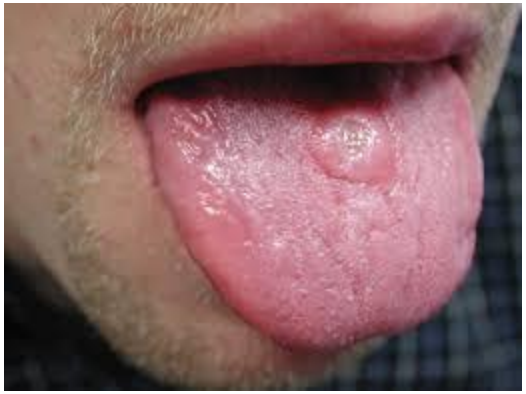
- T. pallidum divide at the point of entry to form a papule and subsequently produce the chancre of primary disease
- incubation period is typically 21 days (range 9–90)

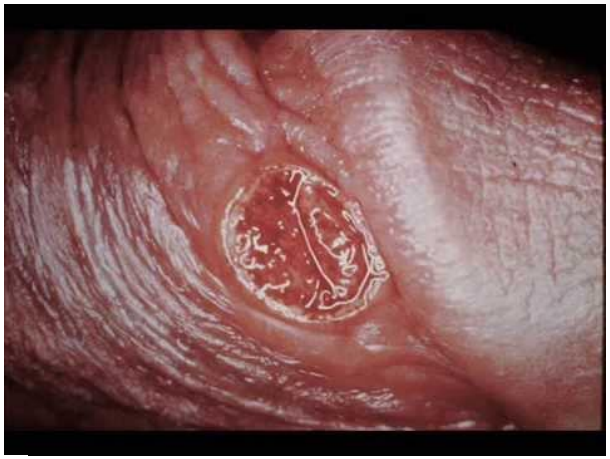
The chancre is classically;

- anogenital (penile, labial, cervical or peri-anal)
- Single
- Painless
- Indurated
- with a clean base discharging clear serum but not pus

However, chancres may also be:

- Multiple
- Painful
- Purulent
- Destructive
- extra-genital (most frequently oral)
- and may cause the syphilitic balanitis of Follmann.

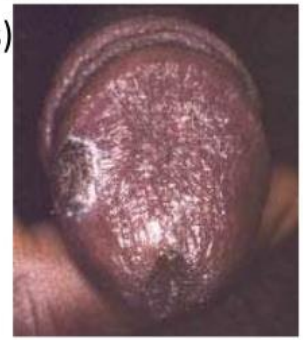


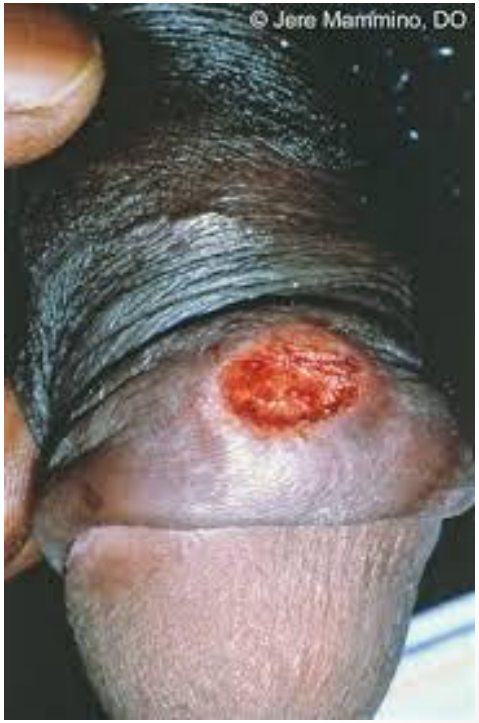


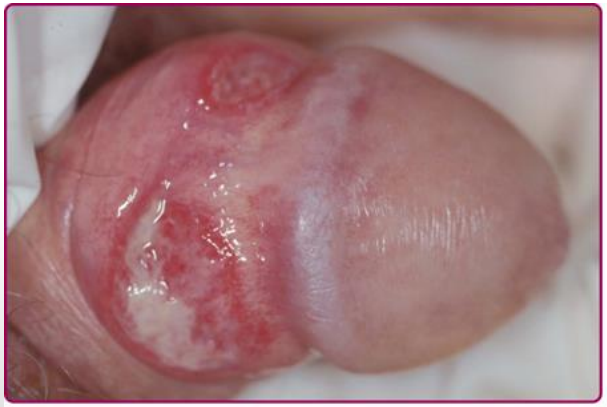
CLINICAL FEATURES

- Erosive indurated painless Chancre over Prepuce with Phimosis – Doughy inflitrate / Nodular Infiltrate / Diffuse Inflitrate)

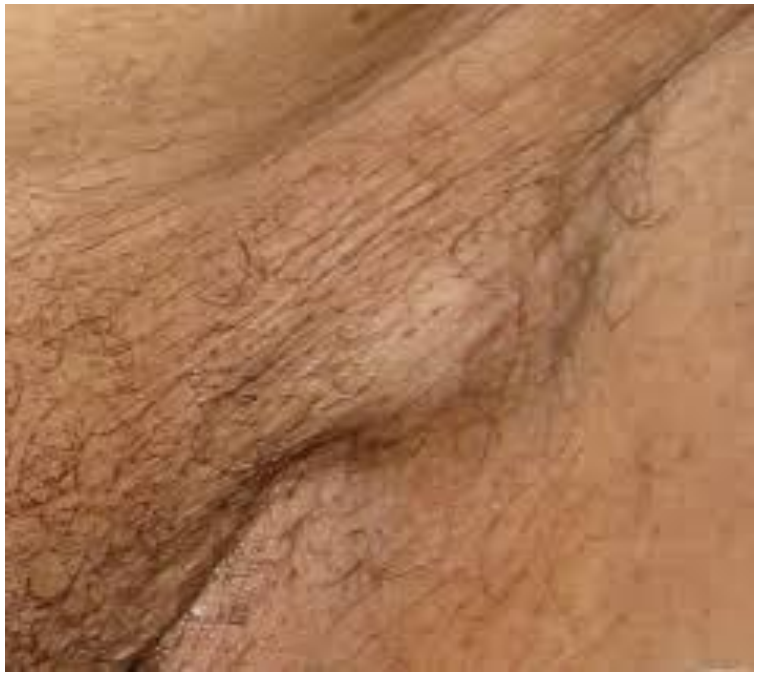
  (Follman's Balanitis of Syphilis)







Source: Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffell DJ, Wolff K: *Fitzpatrick's Dermatology in General Medicine, 8th Edition*: www.accessmedicine.com



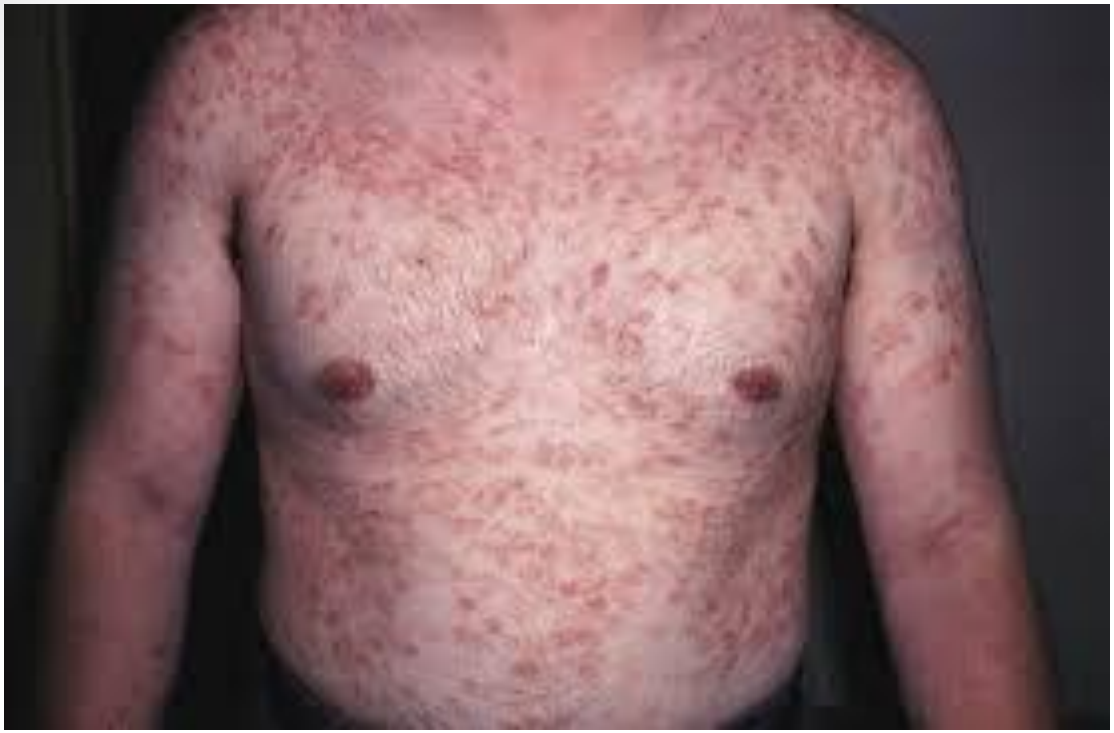
Secondary Syphilis

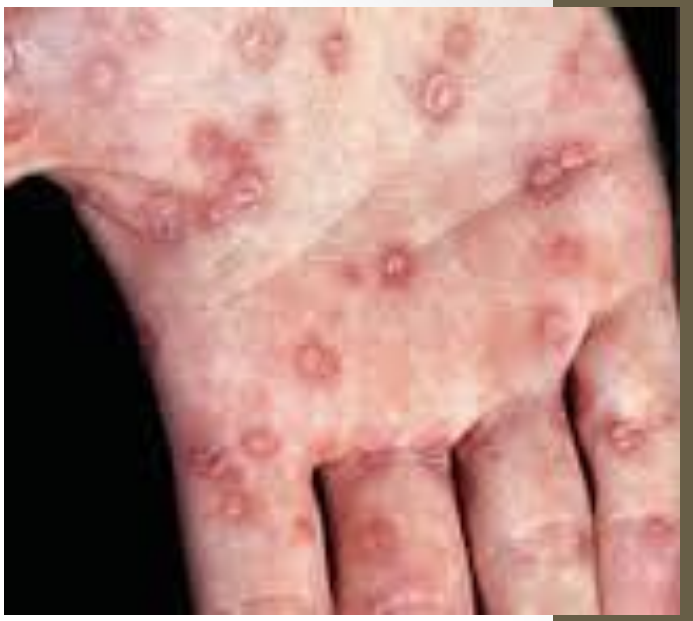
Untreated, 25% of patients will develop signs of secondary syphilis approximately 4–10 weeks after the appearance of the initial chancre.

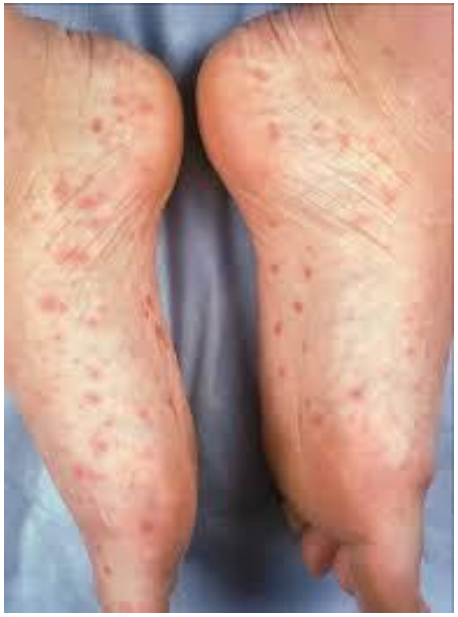
- widespread mucocutaneous rash
  - maculo-papular (50–70%), papular (12%) or macular (10%)
  - may, but does not usually, itch
  - palms and soles (11–70%)
  - May affect hair follicles, resulting in alopecia.

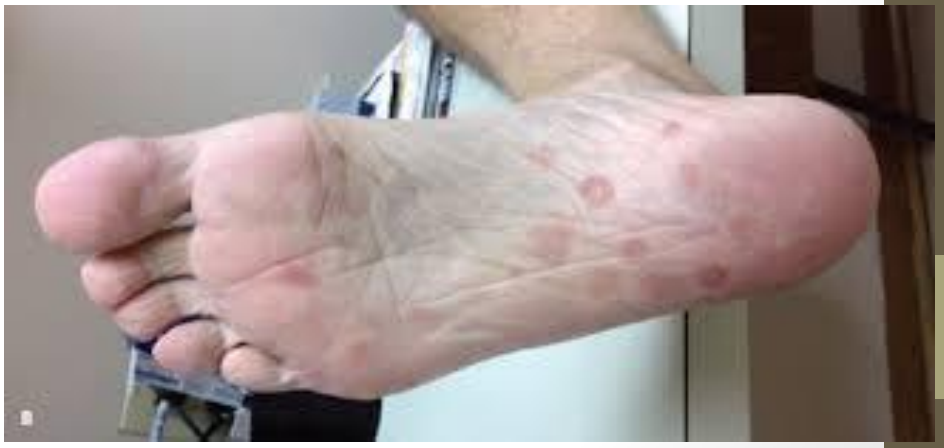
- generalised lymphadenopathy

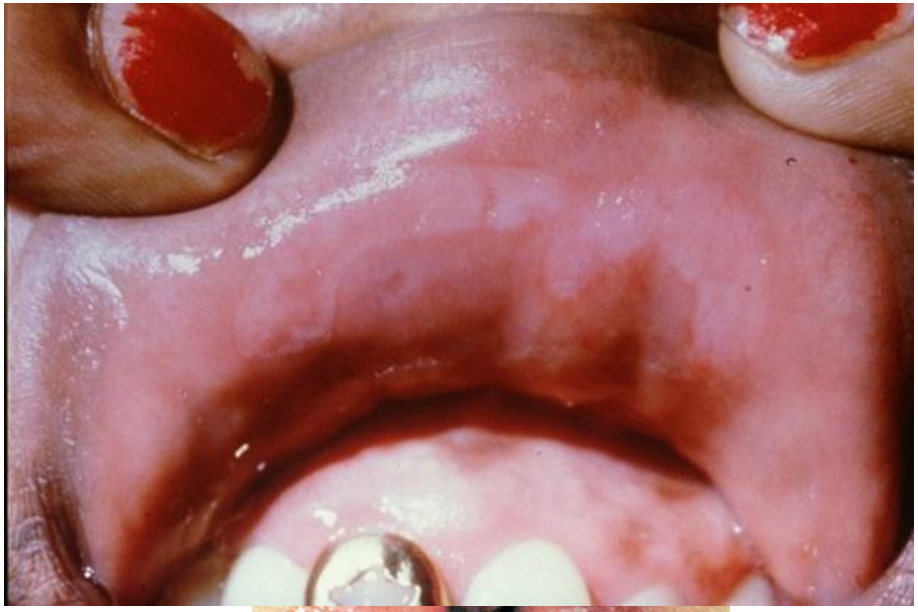
- mucous patches (buccal, lingual and genital)
- condylomata lata
- Hepatitis, glomerulonephritis, splenomegaly
- Neurological complications
  - (1–2%) headache, neck stiffness, photophobia, nausea, cranial nerve palsies, inc. 8th nerve - hearing loss and tinnitus - uveitis (most commonly posterior), optic neuropathy, interstitial keratitis and retinal involvement

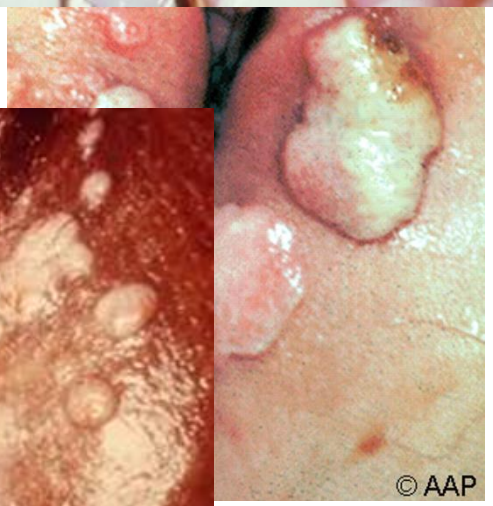








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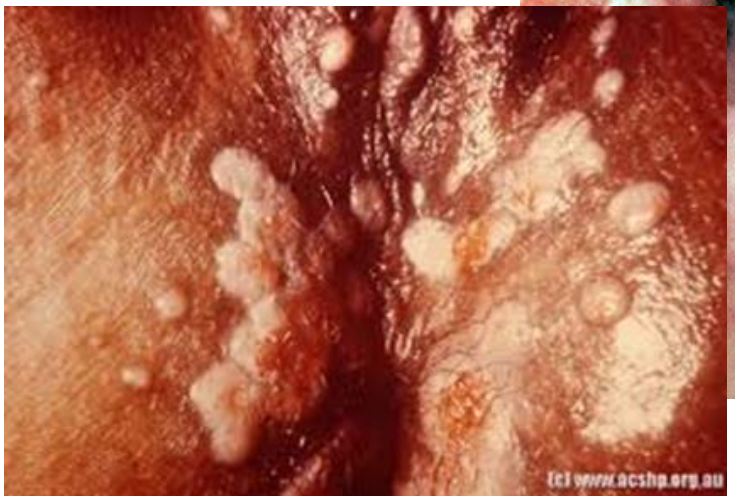

(c) www.acshp.org.au

Latent disease

- Asymptomatic stage
- Early within two years
- Late more than 2 years

The distinction between early and late latent disease is somewhat arbitrary, but important for treatment

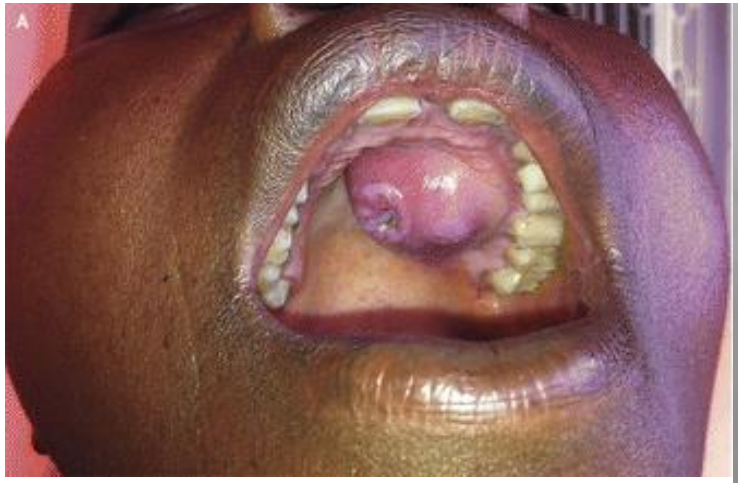
Late disease

Late disease occurs in approximately one-third of untreated patients around 20–40 years after initial infection

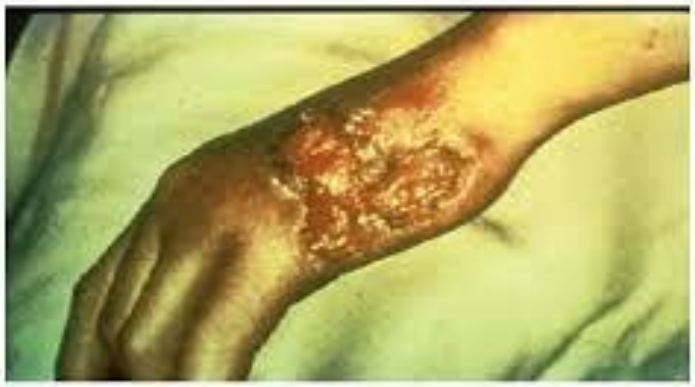
- gummatous disease (15% of patients)
  - granulomatous lesions with central necrosis, usually skin and bone
  - Usually occur about 15 years – may be within 2 years – and resolve with treatment

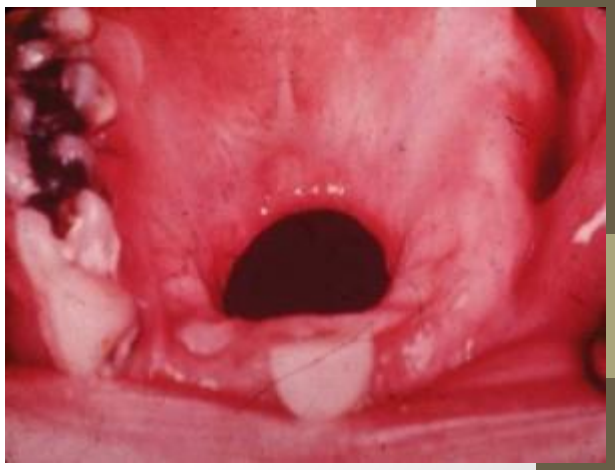
- cardiovascular (10%)
  - Usually occurs 15-30 years , Usually ascending aorta - dilatations and aortic valve regurgitation

- late neurological complications (7%)
  - Meningovascular syphilis
    - Typically, 5–10 years after infection (may be earlier).
    - Infectious arteritis which may result in ischaemic stroke (middle cerebral artery)
  - General paresis .
    - Progressive dementing illness 10–25 years after infection secondary to cortical neuronal loss
    - Seizures and hemiparesis may occur (late)
  - Tabes dorsalis
    - 15–25 years after infection (longest of neurological complications) . Characterised by sensory ataxia and lighting pains . Pupillary abnormalities common (Argyll-Robertson) . Dorsal column loss (absent reflexes, joint position and vibration sense)



Tertiary Syphilis - Gumma





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Congenital Syphilis

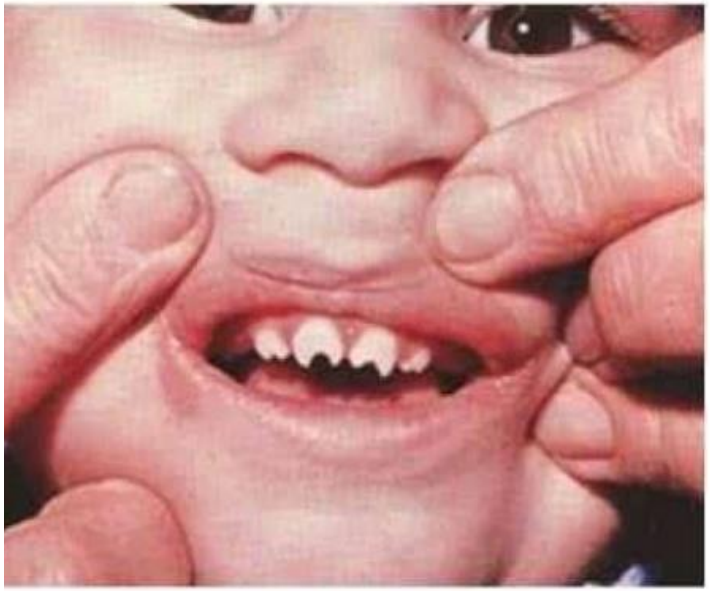
Congenital syphilis

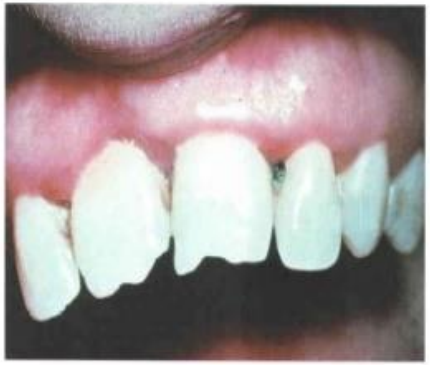
- early (diagnosed in the first two years of life)
  - 2/3 asymptomatic at birth, developing signs by 5 weeks.
  - Common manifestations (40–60% will have one) include:
    - rash, haemorrhagic rhinitis (bloody snuffles), generalised lymphadenopathy, hepatosplenomegaly and skeletal abnormalities

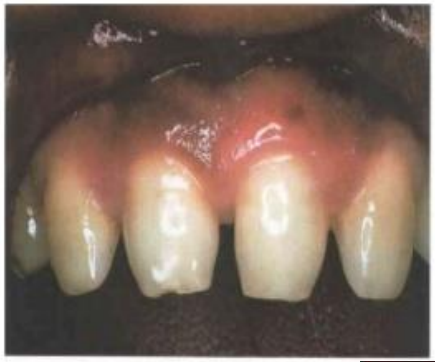
- late (presenting after two years)
  - Stigmata of congenital infection includes: interstitial keratitis; Clutton's joints; Hutchinson's incisors; mulberry molars (maldevelopment of cusps of first molars); high palatal arch; rhagades (peri-oral fissures); sensory-neural deafness; frontal bossing; short maxilla; protuberance of mandible; saddlenose deformity; sterno-clavicular thickening; paroxysmal cold haemoglobinuria; neurological involvement (intellectual disability, cranial nerve palsies)

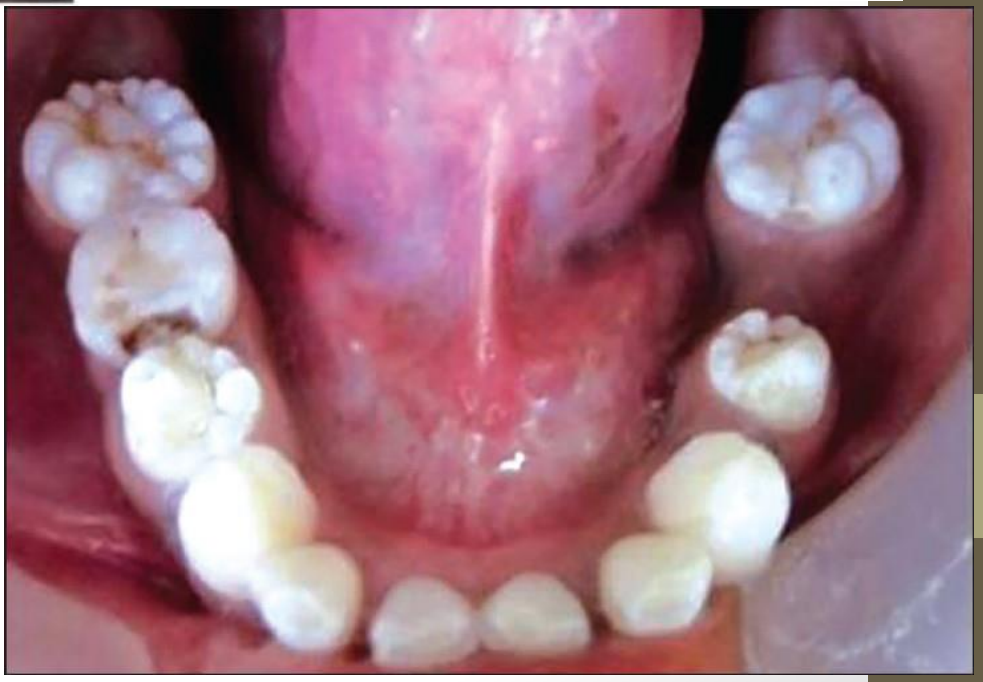
CONGENITAL SYPHILIS

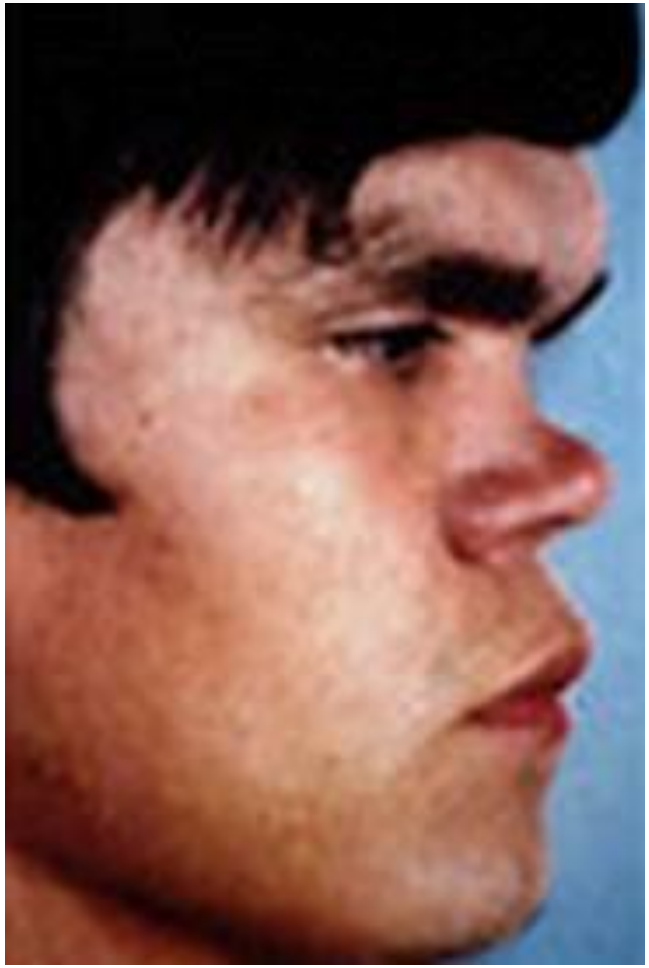
- *The permanent dentition may show characteristic abnormalities known as Hutchinson's teeth; the upper central incisors are widely spaced, centrally notched, and tapered in the manner of a screwdriver. The molars may show multiple, poorly developed cusps (i.e., mulberry molars).*

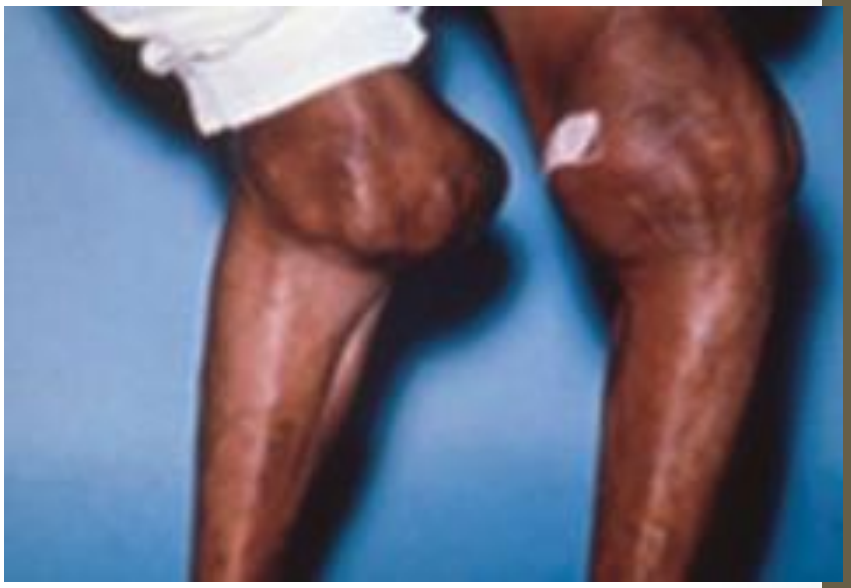












Diagnosis

Laboratory diagnosis

- Demonstration of T. pallidum from lesions or infected lymph nodes by dark ground microscopy
  - not suitable for examining oral lesions due to the presence of commensal treponemes
- Polymerase chain reaction (PCR)
- Serological tests for syphilis – antibody test Treponemal IgG

STS

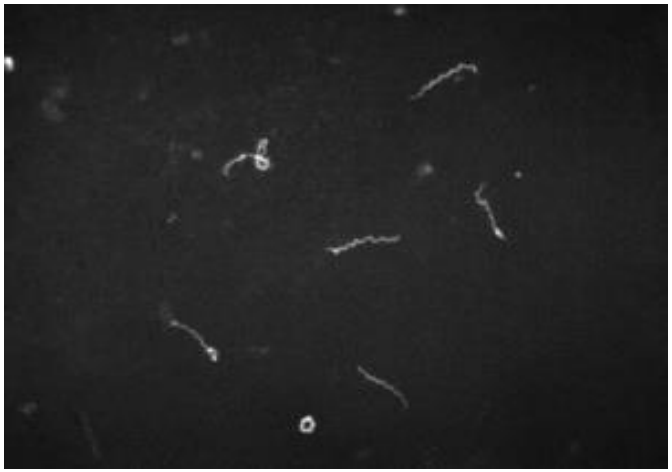
Cannot differentiate syphilis from yaws, bejel, or pinta

Treponemal antibody tests can be classified into:

- Non-specific
  - cardiolipin, lipoidal, reagin or nontreponemal tests: Venereal Diseases Research Laboratory (VDRL)

- Specific (treponemal) tests
  - treponemal enzyme immunoassay (EIA) or Treponema pallidum particle agglutination assay (TPPA)

- VDRL helps stage the infection eg, where the patient has been previously treated and may have been re-infected
- An initial VDRL titre of >16 usually indicates active disease
- VDRL titre of 16 or less does not exclude active infection.
- A negative anti-treponemal IgM test does not exclude active infection, particularly in late disease.



Syphilis

Take a blood sample for STS **

Call Gateway clinic on 0800 055 6442

**Sometimes negative in primary syphilis. Repeat testing may be indicated. Incubation 90 days.

False-negative syphilis serology

- Treponemal screening tests are negative before a chancre develops and may be for up to two weeks afterwards.
- may occur in secondary or early latent syphilis due to the prozone phenomenon

False-positive syphilis serology .

- more likely in autoimmune disease, older age and injecting drug use

- If the test is negative – check window period (90 days)
  - Repeat at six and 12 weeks after an isolated episode which is high risk for exposure to syphilis
  - Repeat at two weeks after possible chancres that are dark-ground negative
  - Repeat at 12 weeks if clinically primary HSV but HSV swab negative.

Assessment and Examination of the patient

- Full sexual history
- Directly question about syphilis
  - Symptoms –including neurological, cardiological
  - Previously diagnosed?
- Previous syphilis testing:
  - Antenatal screening . Blood donation . Sexual health screening .
- Potential for previous infection with non-venereal T. pallidum infection: .
  - Childhood skin infections (yaws) . Previously resident in an endemic area/country
- Full obstetric history (where appropriate)
  - Adverse pregnancy outcomes (which may be due to syphilis) . Identify live births and children who may have late congenital disease

Examination

- Early disease (primary or secondary) to include the following, when indicated:
  - Genital examination (including nodes)
  - Skin examination including mouth, palms and soles
  - Neurological examination if neurological symptoms

- Symptomatic late disease (including suspected late congenital disease);
  - Skin
  - Musculoskeletal system (congenital)
  - Cardiovascular system (for signs of aortic regurgitation)
  - Nervous system (general paresis: dysarthria, hypotonia, intention tremor, and reflex abnormalities; Tabes dorsalis: pupil abnormalities, impaired reflexes, impaired vibration and joint position sense, sensory ataxia and optic atrophy)

Management

- Full STI screen INCLUDING HIV
- Information to patient – long term complications
- No SI until lesions healed / 2 weeks after completion of treatment.
- Partner notification
  - primary syphilis 3/12
  - secondary syphilis – up to 2 years
  - latent syphilis
    - Try to locate any previous serology or documented treatment which would aid disease staging.
    - Unless the timeframe during which infection occurred can be determined, it is reasonable for sexual partners and children born to women diagnosed with late latent syphilis of unknown duration to undergo screening.

Treatment

- Give parenteral wherever possible
- If penicillin allergic consider desensitisation
- If not treated with parenteral penicillin will need life-long follow-up
- Dose and duration of treatment depends on staging

<u>Potentially incubating syphilis</u>

1. Benzathine penicillin G 2.4 MU IM single dose
2. Doxycycline 100 mg PO BD. 14 days
3. Azithromycin 2 g PO stat

Early syphilis (primary, secondary and early latent)

1. Benzathine penicillin G 2.4 MU IM single dose

Alternative regimens

1. Procaine penicillin G 600,000 units IM daily 10 days
2. Doxycycline 100 mg PO BD 14 days
3. Ceftriaxone 500 mg IM daily 10 days
4. Amoxycillin 500 mg PO QDS + Probenecid 500 mg QDS 14 days
5. Azithromycin 2 g PO stat or Azithromycin 500 mg daily 10 days
6. Erythromycin 500 mg PO QDS 14 days

Late latent, cardiovascular and gummatous syphilis

1. Benzathine penicillin 2.4 MU IM weekly for three weeks (three doses)

Alternative regimens

1. Doxycycline 100 mg PO BD for 28 days

2. Amoxycillin 2 g PO TDS plus probenecid 500 mg QDS for 28 days

(Steroids should be given with all anti-treponemal antibiotics for cardiovascular syphilis; 40–60 mg prednisolone OD for three days starting 24 h before the antibiotics).

Neurosyphilis including neurological /ophthalmic involvement in early syphilis

1. Procaine penicillin 1.8 MU–2.4 MU IM OD plus probenecid 500 mg PO QDS for 14 days
2. Benzylpenicillin 10.8–14.4 g daily, given as 1.8–2.4 g IV every 4 h for 14 days

Alternative regimens

1. Doxycycline 200 mg PO BD for 28 days
2. Amoxycillin 2 g PO TDS plus probenecid 500 mg PO QDS for 28 days
3. Ceftriaxone 2 g IM or IV for 10–14 days

Again - Steroids should be given with all anti-treponemal antibiotics for neurosyphilis;

Complications of treatment

- Jarisch-Herxheimer reaction: An acute febrile illness with headache, myalgia, chills and rigours which resolves within 24 hours. Advise antipyretics. It is uncommon in late syphilis but can potentially be life threatening if there is involvement of critical sites (e.g. coronary ostia, larynx and nervous system).

- Procaine reaction (procaine psychosis, procaine mania, Hoigne's syndrome): This is due to inadvertent intravenous injection of procaine penicillin. Fear of impending death, hallucinations or fits immediately after injection and lasts less than 20 minutes. Calm and verbal reassurance is required and restraint may be necessary. Treat seizures if necessary.

Follow-up after treatment

Monitoring with VDRL – Ab test will always stay positive

It may take a number of months for the non-treponemal titres to drop four-fold following treatment

VDRL at three, six and 12 months, then if indicated, six monthly until negative or serofast.

A sustained four-fold or greater increase in the VDRL suggests re-infection or treatment failure.

Outbreak Management

- Identify outbreak
- Case mapping
- Enhanced contact tracing
- Discuss with PHE
- Communication with neighbouring ISH clinics
- Immediate clinic access for contacts or those with symptoms
- Letters to primary and secondary care practitioners
- Discussion around enhanced antenatal testing
- Education sessions arranged
- Publicity

Ongoing concerns

- Large number of contacts
- Untraceable
- Congenital syphilis
- Undiagnosed cases

Any questions?