Over the past two years, the number of notified cases of infectious syphilis — syphilis of less than two years’ duration (Figure 1) — has continued to grow. In the Northern Territory and Queensland, the emerging risk groups are young Aboriginal and Torres Strait Islanders (ATSI), particularly people from the north of the State. In this group, in which young females are infected, there is now a real risk of new cases of congenital syphilis (Figures 2 and 3). In other geographical areas, gay and bisexual males form the major risk group.

Co-infections with other sexually transmitted infections (STIs) are common and should always be tested for simultaneously. Similarly, all STI screens should include a test for syphilis. At-risk patients require screening for co-existing chlamydia, gonorrhoea and/or trichomonas if the patient belongs to the ATSI group. Screening for HIV, hepatitis A, B and C should also occur, with hepatitis A and B vaccination in those who are non-immune. The recommended regular screening for asymptomatic gay and bisexual males is outlined in the now renamed STIGMA guidelines (http://stipu.nsw.gov.au/wp-content/uploads/STIGMA_Testing_Guidelines_Final_v5.pdf).

**Presentation**

Early or infectious syphilis (less than two years’ duration) includes primary, secondary and early latent syphilis (Algorithms 1 and 2).

- Primary syphilis usually manifests as a chancre (an anogenital or, less commonly, extragenital painless, but also sometimes painful, ulcer with indurated edges).

- Progression to secondary syphilis occurs over the following months and presents as an acute systemic illness with rash, which is usually truncal, but also involving palms and soles (Figure 4), condylomata lata (clusters of soft, moist lumps in skin folds of the anogenital area), mucosal lesions, alopecia, lymphadenopathy, hepatitis, or meningitis.

- Early latent syphilis is infection of less than two years’ duration where the patient is asymptomatic.

Late latent syphilis is defined as latent (asymptomatic) syphilis of longer than two years’ duration, or of unknown duration. Tertiary syphilis refers to syphilis of longer than two years’ duration, or of unknown duration, with cardiovascular, central nervous system or skin and bone (gummatous syphilis) involvement.

**Risk of transmission of syphilis from a pregnant mother to her fetus depends on the stage of syphilis during pregnancy. Management is clearly outlined in the ASID Management of Perinatal Infections Guidelines (https://www.asid.net.au/documents/item/368)**
SCREENING FOR SYPHILIS

**ALGORITHM 1**

- **Treponema pallidum screening test**
  - Syphilis Antibody
  - **POSITIVE**
  - Non-treponemal test RPR titre +ve
  - Treponemal test TPPA +ve
    - Past treated/latent infection
    - Treponemal test TPPA -ve
    - Biological false -ve no evidence of syphilis infection
  - Non-treponemal test RPR titre +ve/-ve
  - Treponemal test TPPA -ve
    - Repeat in 2-4 weeks
    - Reorder after treatment

- **NEGATIVE**
  - If high risk, repeat serology during incubation period 9-90 days.
  - If pregnant and high risk repeat at 28-32 weeks gestation.

MANAGEMENT OF SEROPOSITIVE SYPHILIS

**ALGORITHM 2**

- **SYPHILIS**
  - Syphilis antibody positive (seropositive)

  **DETERMINE STAGE**
  - Clinical history, examination, past test results
  - (Syphilis register 1800 032 238)

  **PRIMARY**
  - Chancre present (PCR positive)
  - Risk of foetal infection HIGH

  **SECONDARY**
  - Systemic illness – fever, rash, hepatitis, lymphadenopathy, meningoencephalitis
  - Risk of foetal infection MODERATE

  **LATENT**
  - Asymptomatic
  - <2 years-early
  - Risk of foetal infection LOW

  **TERTIARY**
  - Cardiovascular
  - Neurological
  - Gummatous lesions
  - Risk of foetal infection NEGLIGIBLE

  **CONTACT TRACE**
  - Reorder after treatment
  - 1st: 3 months + duration of symptoms
  - 2nd: 6 months + duration of symptoms
  - Early latent: 12 months

  **TREATMENT**
  - Penicillin dose according to stage
  - Procaine penicillin or benzathine penicillin
  - De-sensitise if necessary

  **REPEAT RPR**
  - 6 weeks, 3 months, 6 months and 12 months
  - Rate and level of fall dependent on stage that treatment commences

  **1st**
  - RPR non-reactive in 12 months
  - Latent/Tertiary: RPR may remain weakly positive indefinitely

  **Consider retreatment**
  - Clinical signs of syphilis present
  - Sustained 4 fold increase in RPR
  - Failure of RPR to decrease 4 fold in 1 year

SCREENING FOR SYPHILIS

**ALGORITHM 1**

- Treponema pallidum screening test
  - Syphilis Antibody
  - **POSITIVE**
  - Non-treponemal test RPR titre +ve
  - Treponemal test TPPA +ve
    - High-risk subject or symptomatic: possible false negative. Occurs rarely in early infection
    - Repeat in 2-4 weeks
  - Non-treponemal test RPR titre +ve/-ve
  - Treponemal test TPPA -ve
  - Biological false -ve no evidence of syphilis infection

**SYPHILIS**

- Syphilis antibody positive (seropositive)

**DETERMINE STAGE**

- Clinical history, examination, past test results
  - (Syphilis register 1800 032 238)

- **PRIMARY**
  - Chancre present (PCR positive)
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- **SECONDARY**
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- Reorder after treatment
  - 1st: 3 months + duration of symptoms
  - 2nd: 6 months + duration of symptoms
  - Early latent: 12 months

**TREATMENT**

- Penicillin dose according to stage
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**1st**

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- Clinical signs of syphilis present
  - Sustained 4 fold increase in RPR
  - Failure of RPR to decrease 4 fold in 1 year

**For further information**

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