Fact Sheet for Health Professionals

Infectious syphilis outbreak

An outbreak of infectious syphilis in Aboriginal and Torres Strait Islander communities has been declared in South Australia.

Background

The South Australian outbreak of infectious syphilis has been linked to an outbreak in Northern and Central Australia which began in 2011 and to the middle of 2019 had affected more than 2,600 people across four jurisdictions: Queensland, Northern Territory, South Australia and Western Australia, including deaths from congenital syphilis.

The public health significance of syphilis lies in its negative impact on the developing foetus in utero as well as enhancing both the transmission and acquisition of HIV.

Clinical features

Syphilis is transmitted via sexual contact or vertical transmission in utero. Syphilis is most infectious within the first two years of infection, during the primary and second stages (early infection).

The genital lesion of **primary syphilis** (chancre) usually appears about four weeks after contact, but can appear up to three months after contact. The chancre is usually firm, round and painless and may go unnoticed. It is highly infectious at this stage. The chancre lasts for three to six weeks and heals regardless of whether or not treatment is given.

The **secondary stage** produces a rough, red rash typically on the palms of the hands and/or the soles of the feet. It can occur immediately or up to six months after the primary chancre has healed. Other secondary stage symptoms include mucous membrane lesions (in the mouth, vaginal or anus), fevers, lymphadenopathy, sore throat, patchy hair loss, headaches, weight loss, muscle aches and fatigue. The mucous membrane lesions of the secondary stage are also highly infectious. Symptoms in this stage will also resolve regardless of treatment. However, one third of those who are not treated will go on to develop tertiary syphilis after a period of 10-30 years, characterised by potentially serious cardiac and neurological complications.

The **early latent stage** is asymptomatic and defined by positive serology but previous negative serology in the previous two years or by a four-fold increase in RPR titres within the last two years.

Syphilis in pregnancy

During pregnancy, in untreated early syphilis (primary and secondary stages), the risk of vertical transmission is very high (70-100%). Up to a third of pregnancies result in miscarriage or stillbirth.

In an outbreak scenario, it is recommended that screening for syphilis during pregnancy should be increased to identify possible cases of congenital syphilis. In addition to testing at the first visit (10-12 weeks), testing should be repeated at 28 weeks, 36 weeks, at delivery, and at the six week post-natal check.

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Testing and diagnosis

To limit the spread of syphilis, testing should be offered to all Aboriginal and Torres Strait Islander people (and partners) residing in or travelling from the outbreak areas.

Testing for syphilis (order 'syphilis serology') should be offered in the following circumstances:

- Where there is clinical suspicion of syphilis.
- During antenatal testing, in line with increased screening recommendations outlined above.
- During routine STI screening in 16-35* year olds, particularly in those who are known to have a sexual network connection to the outbreak areas.
- Anyone who is diagnosed with another STI such as chlamydia, gonorrhoea or trichomonas.
- Anyone aged 16-35* who is having blood taken for another reason (e.g. during an adult health check) or who presents to the emergency department.

HIV testing should be offered at the same time as syphilis testing, as syphilis infection enhances transmission and acquisition of HIV.

* National recommendations are that all Aboriginal and Torres Strait Islander people aged 16-35 years should be offered annual testing for chlamydia, gonorrhoea and trichomonas infection. However, in South Australia approximately 50% of syphilis cases have been in people over the age of 35. Therefore we recommend screening in all Aboriginal and Torres Strait Islander people aged 16-50 years

Contact Adelaide Sexual Health Service (Ph: 08 7117 2800) or CDCB (Ph: 1300 232 272) if interpretation of results is required to differentiate latent/late disease or old, treated infection from an early infection. Correct staging of syphilis is important to ensure that appropriate treatment is provided.

Treatment and management

Immediate treatment should be administered where there is clinical suspicion of syphilis or recent infection is suspected (see CARPA manual or discuss with an Infectious Diseases or Sexual Health Physician).

- An intramuscular injection of benzathine penicillin 1.8 g (2.4 million units) will cure a person who has had syphilis for less than two years.
- Diagnoses in the third trimester of pregnancy should be treated with a second dose of benzathine penicillin 1.8 g (2.4 million units) one week later.

If there is a history of penicillin allergy, consult with an Infectious Diseases or Sexual Health Physician.

Partners of infectious cases should also be immediately notified that they need to present for a full STI screen. SA Health Communicable Disease Control Branch can assist with this process.

Treatment of **late latent infection or infection of unknown duration** requires intramuscular injection of benzathine penicillin 1.8 g (2.4 million units) once a week for 3 doses.

The South Australian Syphilis Outbreak Response

A South Australian Syphilis Outbreak Working Group was formed in May 2017, now comprised of staff from SA Health, Country Health SA, Aboriginal Health Council of SA, Nganampa Health Council, South Australian Health and Medical Research Institute, Adelaide Primary Health Network, Country SA Primary Health Network, affected Local Health Networks, SHINE SA and SAMESH. The Working Group monitors and coordinates the state response.

South Australian Syphilis Register

A South Australian register of Aboriginal cases with syphilis is currently being developed. The register will have the ability to record cases, their treatment history and their sexual partner networks, where known, for the purposes of screening and treatment of cases and their contacts. The register is being modelled on similar registers underway in the Northern Territory and Queensland and in development in Western Australia. The Northern Territory register has been operating for over 15 years and has a number of cases who reside in or travel to and from SA. They may be able to assist whilst the SA Register is under development.

For more information

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Public-I1-A1