GROUP A STREPTOCOCCUS

Information for GPs – please distribute to all medical and nursing staff

1. **Group A *Streptococcus* (GAS) disease has increased, particularly in children.**
2. **If you suspect sepsis, consider a first dose of appropriate IV or IM antibiotic and arrange immediate transfer to hospital.**
3. **In communities with higher GAS burden, including Aboriginal, Māori and Pacific Islander peoples, treat sore throat/tonsilitis empirically with phenoxymethylpenicillin or amoxicillin.**

Background

- GAS (*Streptococcus pyogenes*) causes a wide range of infections; most are noninvasive and localised to skin or mucosal surfaces (eg impetigo, pharyngitis).
- Infection is considered invasive if GAS is identified from a normally sterile site (e.g., blood, joint fluid).
- Complications include sepsis, scarlet fever, necrotising fasciitis, acute rheumatic fever (ARF), and glomerulonephritis.
- Notifications of invasive GAS increased in NSW in July and August 2023, particularly among children.
- Notifications of ARF in 2023 are double the average of the preceding three years.
- Preceding or concurrent influenza (or other respiratory virus infection) may be contributing to adverse outcomes from GAS infection in children.

Management of suspected invasive GAS infection

- Signs and symptoms in children include high fever or early evidence of sepsis, such as drowsiness or confusion or cold and clammy skin. In very young children, this may include poor feeding, decreased muscle tone, increased work of breathing, tachycardia, and reduced urine output.
- Onset is often sudden, and illness progresses rapidly. There may be a sudden deterioration after several days of symptoms of a mild preceding infection. Parental concern that their child is extremely unwell should always be taken seriously.
- In patients with suspected invasive GAS, administer antibiotic treatment and arrange immediate transfer to an emergency department, *with clear communication of concerns for sepsis.*

Management of acute rheumatic fever (ARF)

- ARF symptoms include fever and joint pain (polyarthritis, aseptic monoarthritis or polyarthralgia). Other symptoms include chorea (abnormal body movements), erythema marginatum and subcutaneous nodules. These symptoms are sometimes preceded by a sore throat or skin infection.
- Consider ARF in children and young adults, particularly Aboriginal, Māori and Pacific Islander people and notify the public health unit on 1300 066 055.
- Take a throat swab for culture, order serology (ASOT/Anti-DNAse B) for evidence of preceding GAS infection and refer to hospital. See the Australian ARF RHD Clinical Guidelines for more information on diagnosis and treatment. https://www.rhdaustralia.org.au/arf-rhd-guidelines

Management of non-invasive GAS infection

- For sore throat and tonsilitis: follow the Royal Children's Hospital clinical practice guideline (sore throat). https://www.rch.org.au/clinicalguide/guideline_index/sore_throat/
  - Swab and provide empirical treatment for GAS in patients at high risk of ARF, including Aboriginal, Māori and Pacific Islander people.
- For impetigo and other skin infections: follow the Royal Children's Hospital clinical practice guideline (cellulitis and other bacterial skin infection). https://www.rch.org.au/clinicalguide/guideline_index/Cellulitis_and_other_bacterial_skin_infections/
  - Children with impetigo should be kept home (excluded from childcare/school) until 24 hours after start of antibiotics.

Further information

- Fact sheets for invasive GAS, ARF and impetigo - https://www.health.nsw.gov.au/Infectious/factsheets/

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