

## Acute post streptococcal Glomerulonephritis (APSGN) and Acute Rheumatic Fever (ARF)

Issue date: 25 May 2023 | Issued to: GPs, Clinicians and Emergency Departments

### Summary

- Rates of inflammatory autoimmune responses to Group A Streptococcal infections are increasing in the NT.
- From January to April this year, 13 Aboriginal children aged 2-14 years have been hospitalised with APSGN with the average length of stay of 8 days.
- Over the same period, 42 Aboriginal children aged 5-15 years were diagnosed with ARF.

### Actions

- Treat ALL sore throats and skin sores in high risk populations with benzathine penicillin IM or, second line with 3 days of trimethoprim-sulphamethoxazole (an alternative antibiotic for skin sores only).
- Notify the GP or on-call DMO for suspected cases of APSGN.
- Suspected cases of ARF should be admitted to hospital.

### Group A Streptococcal infection complications

- Group A streptococcus (GAS) is a type of bacteria that can cause sore throat and skin infections.
- In certain people, particularly Aboriginal and Torres Strait Islander children, an autoimmune inflammatory response can occur 2 to 3 weeks after the skin or throat infection caused by Group A Streptococcal infection, and can lead to either:
  - Acute post streptococcal glomerulonephritis OR
  - Acute rheumatic fever – an autoimmune inflammatory response (fever, joint pain, involuntary movements (Sydenham's chorea, heart murmur)

### Rates of inflammatory autoimmune responses to Group A Strep infections are increasing

- The incidence rate of APSGN in 2022 was 3 per 1000 Aboriginal children (58 children) aged 2-14 years in the NT. The incidence of ARF in Aboriginal children aged 5-15 years (127 children) was 8 per 1000 children in this age group in 2022. Almost all of these children were hospitalised.

### Transmission

GAS infection is spread person-to-person through:

- respiratory droplets such as from coughing, sneezing or talking
- contact with bacteria on the skin or contaminated surfaces and objects

### Clinical management – APSGN

- If a case of APSGN is suspected, please notify the GP or the DMO on call.
- Contact tracing should be carried out for all probable and confirmed cases. Prophylactic antibiotics are recommended for all contacts of aged between 12 months and 14 years of age. All contacts should receive education and clinical assessment for symptoms of APSGN, skin sores, sore throat and scabies.

### Clinical management - ARF

- All people suspected of ARF, regardless of severity, should be admitted to hospital to enable an accurate diagnosis, optimal treatment, provision of education about ARF/RHD and its management and access to specialists.
- Secondary prophylaxis with intramuscular injections of benzathine penicillin every 21-28 days significantly reduces ARF recurrence rates compared with placebo or oral penicillin and is the treatment of choice as defined by [RHD Australia](#).

### Prevention

- Encourage patients and their families to reduce the amount of Group A streptococcal bacteria on skin by regular washing hands, bodies, bedding and clothing.
- Scabies infestation is the major cause of infected skin sores in the NT that carry streptococcus. Treat all sore throat/ skin sores and scabies and other skin diseases as per CARPA and promote that patients' families and household members with these conditions should get treated.

### Public health management

- APSGN and ARF are [notifiable conditions](#) under the NT Notifiable Disease Act.

### Further information

- Download the [THINK Acute Rheumatic Fever](#) one page resource
- For prevention, diagnosis and management of [ARF and Rheumatic Heart Disease \(RHD\)](#) refer to the [Rheumatic Heart Disease Australia Guidelines](#).
- For more information and resources including the NT Public Health Guidelines for APSGN go to [NT Health](#).
- Keep up to date with this alert at [Health alerts | NT Health](#).

### Contact

- Contact the [Public Health Unit's Centre for Disease Control](#) (Ph: 1800 008 002).
- NT Rheumatic Heart Disease Program
  - Top End - [RHDdarwin.THS@nt.gov.au](mailto:RHDdarwin.THS@nt.gov.au) Ph: (08) 8922 8454
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