

CLINICAL UPDATE

6th December 2022

Group A Streptococci - What you need to know

Background

There were 851 cases of Scarlet fever and invasive group A strep reported in week 46, compared to an average of 186 for the preceding years.

Scarlet fever is usually a mild illness, but it is highly infectious.

Scarlet fever is caused by bacteria called group A streptococci. These bacteria also cause other respiratory and skin infections such as strep throat and impetigo.

The most serious infections linked to GAS come from invasive group A strep, known as iGAS.

So far this season there have been 5 recorded deaths within 7 days of an iGAS diagnosis in children under 10 in England. During the last high season for Group A Strep infection (2017 to 2018) there were 4 deaths in children under 10 in the equivalent period.

There are lots of viruses that cause sore throats, colds and coughs circulating. These should resolve without medical intervention. However, children can on occasion develop a bacterial infection on top of a virus and that can make them more unwell.

Group A streptococcus (GAS) is a common bacteria. Lots of us carry it in our throats and on our skin and it doesn't always result in illness. However, GAS does cause a number of infections, some mild and some more serious.

iGAS infections are caused by the bacteria getting into parts of the body where it is not normally found, such as the lungs or bloodstream. In rare cases an iGAS infection can be fatal.

Whilst iGAS infections are still uncommon, there has been an increase in cases this year, particularly in children under 10 and sadly, a small number of deaths.

Signs and symptoms

Group A Streptococcus (GAS; *Streptococcus pyogenes*) is a bacterium which can colonise the throat, skin and anogenital tract. It causes a diverse range of skin, soft tissue and respiratory tract infections, including:

- **Scarlet fever** - Symptoms include a rash, a sore throat, flushed cheeks and swollen tongue - The first signs of scarlet fever can be flu-like symptoms, including a high temperature, a sore throat and swollen neck glands (a large lump on the side of your neck). A rash appears 12 to 48 hours later. It looks like small, raised bumps and starts on the chest and tummy, then spreads. The rash makes your skin feel rough, like sandpaper. The rash will be less visible on darker skin but will still feel like sandpaper. More information on scarlet fever can be found on the [NHS website](#), including photos.
- Impetigo
- Erysipelas
- Cellulitis
- Pneumonia
- Tonsillitis
- Pharyngitis

In rare cases, patients may go on to develop post-streptococcal complications, such as:

- rheumatic fever
- glomerulonephritis

GAS can occasionally cause infections that are extremely severe. Invasive GAS (iGAS) is an infection where the bacteria is isolated from a normally sterile body site, such as the blood. Any GAS manifestation can be associated with development of streptococcal toxic shock syndrome, although patients with necrotising fasciitis are at highest risk.

Transmission

GAS is spread by close contact between individuals, through:

- respiratory droplets
- direct skin contact

It can also be transmitted environmentally, through:

- contact with contaminated objects, such as towels or bedding
- ingestion of food inoculated by a carrier

Invasive GAS (iGAS) infection and scarlet fever are both notifiable diseases: health professionals must inform local health protection teams of suspected cases. Guidelines are available for the public health management of iGAS cases in the community and healthcare settings and scarlet fever outbreaks in educational settings.

What you should do if you suspect a GAS infection

All standard IPC precautions, such as hand hygiene, are expected to be known and followed, this update is not exhaustive and is to raise awareness highlight key points.

PPE

Appropriate PPE must be worn by those managing a suspected case and transmission-based precautions should always be applied. The mode of transmission is droplet for respiratory group A strep infection or contact for invasive group A strep bacteria, so PPE required as a minimum for all suspected or confirmed cases is:

- **fluid-repellent surgical mask (worn in all patient care currently),**
- **gloves**
- **apron**
- Consider eye protection where blood / body fluids are also present and consider FFP3/RPE if respiratory infection is suspected and aerosol generating procedures are being performed or the hierarchy of controls cannot be effectively applied e.g., patient is actively coughing where there is poor ventilation.
- *Consider patient to use a facemask where possible particularly in respiratory cases*

Where individuals require hospitalisation, the suspected diagnosis must be flagged to the receiving hospital so that appropriate precautions can be taken.

- **Vehicle decontamination and waste disposal protocols must be followed as per Trust IPC guidelines found in the decontamination manual and the IPC safe practice guidelines. This includes cleaning and disinfection of all exposed interior vehicle surfaces and all exposed equipment.**

If a PPE breach occurs, resulting in an exposure incident, follow the standard procedures of immediate post exposure actions (as per Trust IPC guidelines) and attend A&E for risk assessment (and potential prophylaxis), ensure occupational health are informed and that a Datix is completed detailing the event and actions taken.

References

[C1691-National-infection-prevention-and-control-manual-v-2-3-28102022.pdf \(england.nhs.uk\)](#)

[Group A Strep - What you need to know - UK Health Security Agency \(blog.gov.uk\)](#)

[UKHSA update on scarlet fever and invasive Group A strep - GOV.UK \(www.gov.uk\)](#)

[Group A streptococcal infections: guidance and data - GOV.UK \(www.gov.uk\)](#)