

news release

Investigations Continue as Further Anthrax Death Announced

Laboratory results have confirmed a case of anthrax infection in a deceased heroin user in the NHS Greater Glasgow & Clyde area. This takes the number of confirmed cases of anthrax in the current outbreak in Scotland to eighteen, of whom a total of nine individuals have now died.

This patient died on December 12th and so represents the earliest death linked to this outbreak chronologically, however due to the complexity of the various methods of testing for anthrax it has only been possible to confirm the presence of anthrax infection now. It is important to note that there is no evidence of person to person transmission in this outbreak.

This user died on December 12th and was therefore exposed to heroin in the early stages of this outbreak, however evidence suggests that contaminated heroin may still be in circulation, and drug users all across Scotland must remain vigilant. The outbreak began with the identification of cases in NHS Greater Glasgow & Clyde in December, with cases now having been identified in six NHS board areas across the country, and represents the first known outbreak of anthrax to have occurred in conjunction with drug use.

Dr Colin Ramsay, Consultant Epidemiologist at Health Protection Scotland and head of the national Outbreak Control Team, said: "While public health investigations are continuing to attempt to identify the source of the contamination, no drug samples tested to date have shown anthrax contamination, although a number of other types of potentially harmful bacteria have been found. It must therefore be assumed that all heroin in Scotland carries the risk of anthrax contamination and users are advised to cease taking heroin by any route if at all possible. While we appreciate that this may be extremely difficult advice for users to follow, it remains the only public health protection advice possible based on current evidence. Users are encouraged to find out more about support services in their area by calling Know the Score on 0800 587 5879 or visiting www.scottishdrugservices.com. Those who do continue to use heroin should follow current harm reduction advice, which says that fresh filters should be used on each occasion and that filters should not be re-used. It must be noted however that filters will not make heroin safe or remove all traces of anthrax contamination, so the best advice remains not to use heroin by any method. Users should seek urgent medical attention in the event of symptoms such as redness or swelling at or near an injection site or other symptoms of general illness such as a high temperature, chills or a severe headache, as early antibiotic treatment can be lifesaving."

Police enquiries are also ongoing. Strathclyde Police are coordinating the Scottish Police investigation in support of this public health response. The police are using their experience of major investigations to establish the circumstances of how each individual acquired their anthrax infection and are working to trace the source of the contamination. Detective Superintendent Derek Robertson, who is leading the police investigation, said "Our investigations are supporting the public health response to the current outbreak and we are working hard to attempt to identify the source of the contamination. Anyone with any information on the sale or supply of drugs in their area can report this to Crimestoppers in complete confidence on 0800 555 111 and help remove dealers from their communities".

Details of the case breakdown by NHS board are as follows:

Confirmed cases by NHS board area (total: 18)

- NHS Ayrshire and Arran – 1
- NHS Fife – 1
- NHS Forth Valley – 1
- NHS Greater Glasgow & Clyde – 10
- NHS Lanarkshire – 3
- NHS Tayside – 2

Deaths by NHS board area (total: 9):

- NHS Forth Valley – 1
- NHS Greater Glasgow & Clyde – 6
- NHS Tayside – 2

[ENDS]

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Notes to the Editor

Anthrax (*Bacillus anthracis*) is a type of bacteria and can be identified in tissues, blood or other body fluids. In order to confirm a case, a combination of methods are used in order to differentiate between *Bacillus anthracis* and other bacteria. Some of these tests are genetic and others involve culturing (growing) the organism, and as a result, final confirmation may take some time.

Drug users looking for support in stopping are encouraged to contact Know the Score on 0800 587 5879 or to visit www.scottishdrugservices.com for details of services in their area.

Background information on anthrax

Q1. What is anthrax?

Anthrax is a very rare but serious bacterial infection caused by the organism *Bacillus anthracis*. The disease occurs most often in wild and domestic animals in Asia, Africa and parts of Europe; humans are rarely infected. The organism can exist as spores that allow survival in the environment, e.g. in soil, for many years.

Q2. How does anthrax usually affect humans?

There are three classical forms of human disease depending on how infection is acquired: cutaneous (skin), inhalation and ingestion. In over 95% of cases the infection is cutaneous, generally caught by direct contact with the skins or tissues of infected animals. Inhalation anthrax is rare and is caught by breathing in anthrax spores. Intestinal anthrax is very rare, and occurs from ingestion of contaminated meat or spores.

Q3. How has anthrax been affecting drug users in Scotland?

There is an ongoing outbreak of anthrax in heroin users in Scotland. Since December 2009, a significant number of heroin users have been found to have anthrax infection. Sadly, a number of these people have died. It is thought that they contracted anthrax from taking heroin contaminated by anthrax spores.

Q4. How common is anthrax?

The disease was also known as 'wool-sorters disease' and was a recognised occupational hazard for some workers, including woollen mill workers, abattoir workers, tanners, and those who process hides, hair, bone and bone products. However, anthrax is now uncommon in humans in the UK, only a handful of cutaneous cases have been notified over the last decade. A death from anthrax occurred in Scotland in 2006; this was a case of atypical inhalation anthrax which probably followed exposure as a result of playing/handling animal hide drums. Human infections are more frequent in countries where the disease is common in animals, including countries in South and Central America, southern and eastern Europe, Asia and Africa.

Anthrax in drug users appears to be very rare; prior to the current outbreak in Scotland, only one previous case had been reported in Norway in 2000.

Q5. How long can you have the infection before developing symptoms?

This is dependent on the dose and route of exposure and may vary from one day to eight weeks. However, symptoms usually develop within 48 hours with inhalation anthrax and 1-7 days with cutaneous anthrax. It is not known exactly how long symptoms can take to develop following the use of contaminated heroin, however in most cases during the current outbreak, symptoms started within 1 to 7 days of taking heroin.

Q6. What are the symptoms?

Early identification of anthrax can be difficult as the initial symptoms are similar to other illnesses.

Symptoms vary according to the route of infection:

Anthrax in drug users

Drug users may become infected with anthrax when heroin or the cutting agent mixed with heroin has become contaminated with anthrax spores. This could be a source of infection if injected, smoked or snorted. The clinical presentation is likely to vary according to the way in which the heroin is taken and might include:

- Swelling and redness at an injection site, which may or may not be painful
- Abscess or ulcer at an injection site often with marked swelling (oedema)
- Septicaemia (blood poisoning)
- Meningitis
- Symptoms of inhalational anthrax (see below)

Cutaneous anthrax - Local skin involvement after direct contact.

- Commonly seen on hands, forearms, head and neck. The lesion is usually single
- 1-7 days after exposure a raised, itchy, inflamed pimple appears followed by a papule that turns vesicular (into a blister). Extensive oedema or swelling accompanies the lesion – the swelling tends to be much greater than would normally be expected for the size of the lesion and this is usually PAINLESS
- The blister then ulcerates and then 2-6 days later the classical black eschar develops
- If left untreated the infection can spread to cause blood poisoning

Inhalation anthrax - symptoms begin with a flu-like illness (fever, headache, muscle aches and non-productive cough) followed by severe respiratory difficulties and shock 2-6 days later. Untreated disease is usually fatal, and treatment must be given as soon as possible to reduce mortality.

Intestinal anthrax is contracted by the ingestion of contaminated carcasses and results in severe disease which can be fatal. This is found in some parts of the world where the value of an animal dying unexpectedly outweighs any fears of contracting the disease.

Q7. Can anthrax be treated?

Cutaneous anthrax can be readily treated and cured with antibiotics. Mortality is often high with inhalation and gastrointestinal anthrax, since successful treatment depends on early recognition of the disease.

Prompt treatment with antibiotics and, where appropriate, surgery is important in the management of anthrax related to drug use.

Q8. How is anthrax spread?

A person can get anthrax if they inject, inhale, ingest or come into direct physical contact (touching) with the spores from the bacteria. These spores can be found in the soil or in contaminated drugs. It is extremely rare for anthrax to spread from person-to-person. Airborne transmission from one person to another does not occur; there have been one or two reports of spread from skin anthrax but this is very, very rare.

Q9. How do drug users become infected with anthrax?

Heroin or the cutting agent mixed with heroin may become contaminated with anthrax spores from the environment. This could be a source of infection if injected, smoked, or snorted.