CONDITION

Necrotizing fasciitis of the perineum

A rapidly spreading bacterial infection that destroys tissue around the genitals and anus.

WHAT IT IS
Rapidly spreading infection destroying tissue around the genitals and anus

BODY SYSTEM
Skin, soft tissues, urinary and reproductive areas

MAIN SYMPTOMS
Severe pain, swelling, skin discoloration, fever

WHAT CAUSES IT
Bacterial infection, often involving several types

HOW IT IS DIAGNOSED
Urgent examination, surgical findings, imaging and cultures

MAIN TREATMENT
Emergency surgery, intravenous antibiotics, intensive supportive care

CAN IT BE CURED?
Sometimes - rapid treatment can stop the infection

IS IT AN EMERGENCY?
Yes - suspected symptoms require immediate hospital treatment

LONG-TERM OUTLOOK
Recovery can be prolonged; severe cases may be fatal

Overview

Necrotizing fasciitis of the perineum is a rare but life-threatening bacterial infection. The perineum is the area around and between the genitals and anus. The infection may spread into the groin, buttocks, thighs, or lower abdomen.

The infection damages tissue beneath the skin, including fat and fascia. Fascia is the strong connective tissue surrounding muscles, nerves, and blood vessels. Blood flow may become blocked, causing affected tissue to die.

At first, the skin may not look as serious as the damage underneath. The infection can then spread quickly over hours or days. This is why suspected necrotizing fasciitis needs emergency hospital treatment rather than a routine appointment.

The condition can affect anyone. It is more likely in people with certain health problems, but it

can also develop in people without known risk factors.

Symptoms

Severe pain is often an early symptom. The pain may be much worse than expected from the skin's appearance. It may affect the genitals, the area around the anus, or nearby parts of the groin.

Other possible symptoms include:

As nerves are damaged, a painful area may become numb. Less pain does not necessarily mean that the infection is improving.

Symptoms can look different on different skin tones. Redness may be difficult to see on darker skin. Swelling, warmth, tenderness, purple or grey discoloration, and changes from the person's usual skin colour may be more noticeable.

These symptoms can have causes other than necrotizing fasciitis. However, rapidly worsening pain, swelling, discoloration, or serious illness around the genitals or anus must be assessed immediately.

- Rapidly increasing swelling, warmth, or redness
- Tender or tight-feeling skin
- Fever, chills, weakness, or feeling seriously unwell
- Red, purple, grey, or black skin
- Blisters, open wounds, or foul-smelling fluid
- A crackling feeling beneath the skin caused by gas in the tissue
- Confusion, dizziness, fast breathing, or a racing heartbeat

Causes and risk factors

The condition happens when bacteria enter tissue and spread along the deeper layers beneath the skin. Several types of bacteria are often involved at the same time. They may include bacteria normally found on the skin, in the bowel, or in the urinary and genital areas.

Bacteria may enter through:

Sometimes no clear starting point is found.

A weakened immune response or reduced blood supply can make it harder for the body to

contain the infection. Risk factors include diabetes, obesity, advanced kidney or liver disease, cancer, heavy alcohol use, and medicines or conditions that suppress the immune system.

Risk factors increase the chance of developing the condition, but they do not prove that someone has it. Some people who develop it have no obvious risk factor.

- A cut, sore, pressure injury, burn, or surgical wound
- An abscess or infected hair follicle
- An infection around the anus or bowel
- A urinary or genital infection
- Recent surgery, injections, or injury in the area

Diagnosis

Diagnosis begins with an urgent examination and assessment of how unwell the person is. Clinicians look for severe tenderness, swelling, skin changes, fluid, blisters, numbness, or signs that the infection is spreading.

Blood tests can show inflammation, infection, dehydration, kidney problems, or other organ strain. Blood and wound samples may be taken to identify the bacteria and help select antibiotics like amoxicillin or doxycycline . Treatment usually begins before culture results are available.

A CT scan is often used to look for gas, fluid, or tissue changes and to show how far the infection has spread. Ultrasound or MRI may be useful in selected situations. However, imaging cannot reliably rule out an early infection, and scans should not delay surgery when there is strong concern.

The most certain findings are often made during surgery. Surgeons can directly see whether tissue has lost its blood supply or can be separated unusually easily from surrounding tissue. Removed tissue and fluid are sent to a laboratory for testing.

There is no single blood test or scan that safely excludes this condition.

Treatment and management

Treatment starts in hospital as soon as the condition is suspected. The main treatments are emergency surgery and antibiotics given into a vein.

During surgery, the team removes dead and infected tissue. This procedure is called surgical

debridement. Removing this tissue helps stop the spread and allows antibiotics to reach healthier areas.

It is common to need more than one operation. Surgeons may inspect the area again and remove any remaining damaged tissue. The wound is often left open at first so it can be monitored and cleaned.

Broad-spectrum antibiotics are started immediately. These cover several groups of bacteria while laboratory cultures are pending. The antibiotic plan may then be adjusted according to the bacteria found and the person's response.

People who are seriously unwell may need intensive care. Support can include intravenous fluids, oxygen, medicines to support blood pressure, nutritional support, and treatment for kidney or breathing problems.

Temporary urinary catheters or bowel diversion may sometimes be needed to keep urine or stool away from the wound. A bowel diversion brings part of the bowel to an opening in the abdomen, called a stoma. This is not required in every case.

Once the infection is controlled, wound treatment may include special dressings or negative-pressure wound therapy. This uses gentle suction to remove fluid and support healing. Large wounds may later need a skin graft, reconstructive surgery, or both.

Hyperbaric oxygen treatment is available in some centres. It involves breathing oxygen in a pressurised chamber. Evidence for its benefit is limited, and it must never delay surgery or antibiotics.

Complications

Bacteria and the body's response to infection can lead to sepsis. Sepsis is a dangerous reaction to infection that can damage organs. Blood pressure may fall sharply, causing septic shock.

Other complications can include:

Loss of tissue around the genitals may affect body image, intimacy, and confidence. The emotional effects can continue after the wound has healed. Some people experience anxiety, low mood, sleep problems, or distressing memories of intensive care.

Even with treatment, severe cases may be fatal. Early surgery and antibiotics offer the best chance of controlling the infection.

- Kidney, lung, heart, or other organ failure

- Extensive loss of skin and deeper tissue
- Blood clots or prolonged weakness after critical illness
- Urinary, bowel, or sexual difficulties
- Scarring, altered sensation, or long-lasting pain
- The need for reconstructive surgery or a temporary stoma

Prevention

Necrotizing fasciitis of the perineum cannot always be prevented. It can begin without an obvious injury, and some people have no known risk factors.

Practical steps that may reduce risk include cleaning minor wounds, using clean dressings, and seeking care if a wound becomes increasingly painful, swollen, hot, or starts leaking fluid. Persistent infections or abscesses around the genitals or anus should also be assessed.

Managing diabetes and other long-term conditions may support wound healing and the immune response. This lowers some risks but does not guarantee prevention.

After surgery or a procedure in the area, follow the wound-care instructions provided by the clinical team. Report worsening pain, swelling, discharge, fever, or skin colour changes promptly.

Living with it and what to expect

The early course is usually intense. A person may spend days or weeks in hospital and may need several operations. The exact course is shaped by how far the infection has spread, which organs are affected, and how much tissue must be removed.

After the infection is controlled, wound healing can take weeks or months. Dressings, home nursing, outpatient appointments, and further surgery may be needed. Skin grafts and reconstructed areas can look and feel different from the surrounding skin.

Tiredness and muscle weakness are common after a severe infection, major surgery, or intensive care. Physical rehabilitation can help with walking, strength, and daily activities. Return to work and usual routines may need to happen gradually.

Urinary, bowel, or sexual function may recover, remain changed, or require further treatment. Changes depend on which tissues were affected. A urology, colorectal, plastic surgery, wound-care, or sexual health team may be involved in follow-up.

Emotional recovery is also important. Counselling or psychological support may help with anxiety, low mood, body-image concerns, or difficulties with intimacy. These concerns are valid parts of recovery.

Routine follow-up usually checks wound healing, nutrition, movement, organ recovery, and the management of conditions such as diabetes. New rapidly worsening pain, swelling, fever, or skin discoloration is not a routine follow-up issue and requires urgent assessment.

When to get medical help

Go to an emergency department or call emergency services now for severe or rapidly worsening pain around the genitals, anus, groin, or nearby skin, especially when there is swelling, fever, skin discoloration, or a serious feeling of illness.

Emergency help is also needed for:

Do not wait for all symptoms to appear. Do not rely on a routine appointment if symptoms are progressing quickly.

During recovery, contact the treating team promptly about increasing wound pain, new discharge, fever, wound opening, or problems with a catheter or stoma. Call emergency services if these occur with confusion, breathing difficulty, collapse, or rapidly worsening illness.

- Confusion, fainting, severe weakness, or difficulty staying awake
- Fast or difficult breathing
- Grey, purple, or black skin
- Blisters, foul-smelling fluid, or rapidly spreading swelling
- Severe pain around a recent wound, operation, abscess, or infection

Common questions

Is necrotizing fasciitis of the perineum the same as a normal skin infection?

No. A usual skin infection mainly affects the skin and often responds to antibiotics alone. Necrotizing fasciitis spreads through deeper tissue, damages blood supply, and usually requires emergency surgery as well as intravenous antibiotics.

Can it be cured?

The infection can sometimes be stopped with rapid surgery, antibiotics, and supportive care.

However, treatment cannot always reverse tissue or organ damage that has already occurred. Severe cases can still be fatal.

How quickly does it spread?

It can progress over hours or days. The visible skin changes may lag behind the damage beneath the skin. Rapidly worsening pain or swelling is therefore more important than waiting for a wound to look severe.

Is it contagious?

The condition itself is not usually passed from person to person through ordinary contact. Some bacteria that can contribute to it may spread between people, but this rarely leads to necrotizing fasciitis. Hospitals use appropriate wound and infection-control precautions.

Will surgery affect sexual or urinary function?

It can, but the effects are different for each person. They depend on the infection's location, the amount of tissue removed, and the reconstruction needed. Rehabilitation, reconstructive surgery, and specialist sexual or urinary care may help.

Can it come back after treatment?

A new infection is possible, particularly if there is an ongoing wound, abscess, or poorly controlled health condition. Routine follow-up focuses on healing and managing these risks. Any new rapidly worsening symptoms need emergency assessment.

Sources

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