CONDITION

Fournier disease

Fournier disease is a rapidly spreading bacterial infection that destroys tissue around the genitals and perineum.

WHAT IT IS
Rapidly spreading tissue infection around the genitals and perineum

BODY SYSTEM
Skin, soft tissues, genitals, and urinary region

MAIN SYMPTOMS
Severe pain, swelling, skin discoloration, fever

WHAT CAUSES IT
Usually mixed bacterial infection

HOW IT IS DIAGNOSED
Urgent examination and surgical exploration

MAIN TREATMENT
Emergency surgery, intravenous antibiotics, and intensive support

CAN IT BE CURED?
Yes - emergency treatment can clear infection

IS IT AN EMERGENCY?
Yes - suspected infection needs immediate hospital treatment

LONG-TERM OUTLOOK
Recovery possible, but severe cases can be fatal

Overview

Fournier disease is a rare but serious infection of the soft tissues around the genitals and perineum. The perineum is the area between the genitals and anus. The infection can also spread into the buttocks, groin, thighs, or abdominal wall.

It is a type of necrotising soft tissue infection . This means bacteria spread along the layers beneath the skin and damage tissue very quickly. The skin may look only mildly affected at first, even when deeper tissue is seriously infected.

Fournier disease can affect people of any sex. It may involve the scrotum, penis, vulva, or nearby tissues. It is not a sexually transmitted infection, although an infection or injury in the genital area can sometimes be the starting point.

This condition matters because it can spread into the bloodstream and affect vital organs. Early surgery and antibiotics like amoxicillin or doxycycline improve the chance of controlling it. Suspected Fournier disease always needs emergency hospital assessment.

Symptoms

Symptoms often worsen over hours or a few days. Pain may be much stronger than expected from the skin's appearance.

Possible symptoms include:

Not everyone has every symptom. Fever may be absent, especially early on or in people with a weakened immune system.

Later in the infection, pain may sometimes decrease because nerves have been damaged. This is not necessarily a sign of improvement. Increasing discoloration, numbness, swelling, or illness still needs emergency care.

- Severe or increasing pain in the genitals, perineum, or around the anus
- Swelling, warmth, or tenderness
- Red, purple, grey, or black skin
- Fever, chills, weakness, or feeling unusually unwell
- Blisters, open areas, or fluid leaking from the skin
- A bad smell from damaged or infected tissue
- A crackling feeling under the skin caused by gas in the tissues
- Confusion, dizziness, fast breathing, or reduced alertness

Causes and risk factors

Fournier disease is usually caused by several kinds of bacteria acting together. These may include bacteria that normally live harmlessly on the skin or in the bowel. They can become dangerous after entering deeper tissue.

The infection may begin with:

Sometimes no starting point is found.

Diabetes is an important risk factor, particularly when blood glucose is difficult to control. Other factors that may make the infection more likely or harder to fight include obesity,

reduced circulation, kidney or liver disease, cancer, heavy alcohol use, and medicines or conditions that weaken the immune system.

A group of diabetes medicines called SGLT2 inhibitors has been linked to rare reports of Fournier disease. This does not mean that most people taking these medicines are at risk. Do not stop a prescribed medicine because of concern alone. Seek emergency care if genital or perineal pain, swelling, redness, or fever develops, and tell the hospital team which medicines you take.

Having a risk factor does not mean that you will develop Fournier disease. Some people who develop it have no known underlying health problem.

- An abscess or infection around the anus
- A urinary or genital infection
- A cut, sore, pressure injury, or inflamed hair follicle
- Recent surgery, a medical procedure, or an injury
- A blocked or infected gland
- A bowel leak or other source of infection inside the pelvis

Diagnosis

Diagnosis begins with an urgent examination. The healthcare team will ask when symptoms started, how quickly they are changing, and whether you have diabetes, recent surgery, an injury, or another infection.

Blood tests can show signs of severe infection and check how the kidneys, liver, blood clotting, and other organs are working. Blood and wound cultures may identify the bacteria involved. Cultures help guide antibiotic treatment, but results take time and treatment cannot wait for them.

A CT scan may show gas, fluid, swelling, or the extent of infection beneath the skin. Ultrasound or other imaging may sometimes be used. However, a normal-looking scan cannot always rule out an early infection.

Surgical exploration is often the most direct way to confirm the diagnosis and see how far the tissue damage extends. If Fournier disease is strongly suspected, imaging should not delay emergency surgery.

Treatment and management

Treatment takes place in hospital and usually begins immediately. The main treatments are surgery and antibiotics given into a vein.

During surgery, the surgeon removes dead and infected tissue. This is called debridement . Removing this tissue helps stop the infection and allows healthier tissue to recover. The visible skin changes may not show the infection's full extent, so more than one operation is often needed.

Broad antibiotic treatment is started before the exact bacteria are known. It is later adjusted using culture results and the person's response. Treatment may cover several groups of bacteria because Fournier disease is often a mixed infection.

Other hospital care may include:

Some people need temporary intensive care. A temporary catheter may drain urine. Less commonly, a temporary opening from the bowel onto the abdomen, called a colostomy, may be needed to keep stool away from a large wound.

Once the infection is controlled, the wound may close gradually. Larger wounds may need a skin graft or reconstructive surgery. Hyperbaric oxygen, which involves breathing oxygen in a pressurised chamber, is sometimes used as an additional treatment where available. It must not delay surgery, and its benefit is not certain in every case.

- Fluids, oxygen, pain relief, and nutritional support
- Treatment for sepsis, which is a harmful whole-body response to infection
- Support for blood pressure, breathing, or kidney function
- Careful management of blood glucose
- Regular wound cleaning and dressing changes
- Negative-pressure wound therapy, which uses gentle suction over a sealed dressing

Complications

Fournier disease can lead to sepsis, low blood pressure, kidney injury, breathing problems, abnormal blood clotting, or failure of several organs. These complications can be life-threatening.

Surgery may leave a large wound because all dead tissue must be removed. Depending on the area involved, longer-term effects can include scarring, altered sensation, ongoing pain, swelling, or changes in urinary, bowel, or sexual function.

Damage involving the genitals may affect body image, intimacy, or fertility. The effect differs according to which tissues were involved and what reconstruction was required.

A prolonged hospital stay and repeated procedures can also affect mood and sleep. Anxiety, low mood, or distress about the wound and appearance are understandable. Rehabilitation and psychological support may be useful during recovery.

Prevention

Fournier disease cannot always be prevented. It can occur without an obvious injury or warning, and developing it is not evidence of poor hygiene.

You may be able to reduce some risks by managing diabetes with your usual care plan and getting early treatment for infections, abscesses, or wounds around the genitals, anus, or perineum.

Keep wounds clean and follow the wound-care instructions given after surgery or a procedure. Seek medical advice if a wound becomes more painful, swollen, red, or starts draining pus.

If you take an SGLT2 inhibitor for diabetes, heart failure, or kidney disease, be aware of new pain, tenderness, redness, or swelling around the genitals or perineum, especially with fever or feeling unwell. The overall risk is low, but these symptoms need urgent assessment.

Living with it and what to expect

Recovery depends on how far the infection spread, how quickly treatment began, which organs were affected, and your health before the infection. Some people recover after a shorter hospital stay, while others need intensive care, repeated surgery, and several weeks in hospital.

After the infection is controlled, wound healing may take weeks or months. Dressing changes and follow-up appointments may continue after discharge. A community nursing or specialist wound team may help with care at home.

Rehabilitation can include rebuilding strength, improving mobility, and gradually returning to everyday activities. Sitting, walking, toileting, or wearing usual clothing may be uncomfortable while the wound heals. Your care team can advise on practical adjustments.

Reconstructive surgery may happen during the same admission or later, once infection and swelling have settled. Further procedures are not always required.

Some people have lasting scars or changes in sensation. Sexual activity may need to wait until

wounds have healed and it is comfortable. If sexual function, continence, fertility, or body image is affected, specialist support may help.

Regular follow-up focuses on wound healing, reconstruction, underlying conditions such as diabetes, and the emotional effects of a serious illness. Recovery is often gradual rather than steady, and energy levels can take time to return.

When to get medical help

Get emergency medical help now for severe or rapidly worsening pain, swelling, redness, or discoloration around the genitals, perineum, or anus. This is especially important if you also have fever, confusion, dizziness, weakness, a bad-smelling discharge, or feel severely unwell.

Do not wait for the skin to turn dark or for all symptoms to appear. Do not try to drain a swelling yourself. If you feel faint, confused, short of breath, or unable to travel safely, call emergency services.

After hospital treatment, seek urgent help for new fever, increasing wound pain, spreading redness, darkening tissue, pus, a strong smell, wound opening, confusion, or a sudden decline in how you feel.

Routine follow-up is appropriate for questions about dressing supplies, gradual scar changes, returning to work or sexual activity, and ongoing rehabilitation. Contact your usual follow-up team sooner if healing appears to stop or day-to-day function is not improving as expected.

Common questions

Is Fournier disease contagious?

It is not usually passed from one person to another. The bacteria involved often come from the affected person's own skin, bowel, or urinary tract. Standard wound-care precautions help prevent bacteria from spreading from drainage or dressings.

Can Fournier disease be cured?

Yes, the infection can be cleared with urgent surgery, antibiotics, and supportive care. Treatment may still leave tissue loss, scars, or changes in function. Severe cases can be fatal despite treatment.

How quickly does Fournier disease spread?

It can progress over hours or days. The speed cannot be judged reliably from the skin's appearance because infection may spread through deeper tissue first. Rapidly worsening pain

or swelling needs emergency assessment.

Can women get Fournier disease?

Yes. It can affect the vulva, perineum, groin, buttocks, or abdominal wall. It may be overlooked if early swelling or skin changes are less visible.

Why is surgery needed instead of antibiotics alone?

Antibiotics may not reach dead tissue well. Surgery removes the damaged tissue where bacteria can continue to grow. It also allows the team to identify the infection's true extent.

Will the tissue grow back after surgery?

Removed tissue does not simply grow back. Smaller wounds may close as new tissue forms, while larger wounds may need skin grafting or reconstructive surgery. The plan is based on the wound's location and size.

Sources

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