CONDITION

Mammary paget's disease

Mammary Paget's disease is a rare breast cancer that causes persistent changes in the nipple and surrounding skin.

WHAT IT IS
Rare breast cancer affecting the nipple skin

BODY SYSTEM
Breasts and nearby lymph nodes

MAIN SYMPTOMS
Nipple rash, itching, crusting, discharge

WHAT CAUSES IT
Cancer cells, usually from underlying breast ducts

HOW IT IS DIAGNOSED
Nipple or skin biopsy, with breast imaging

MAIN TREATMENT
Breast surgery, sometimes radiation and cancer medicines

CAN IT BE CURED?
Sometimes - localized cancer can be removed

IS IT AN EMERGENCY?
Sometimes - severe infection or sudden breathing difficulty

LONG-TERM OUTLOOK
Often treatable when localized; invasive cancer worsens outlook

Overview

Mammary Paget's disease, also called Paget disease of the breast or nipple, is a rare form of breast cancer. It affects the nipple and often the areola, which is the darker skin around the nipple.

The condition happens when cancer cells enter the surface layer of the nipple skin. In most people, these cells are linked to cancer deeper inside the same breast. This may be ductal carcinoma in situ, or DCIS, which has not spread beyond the milk ducts. It may instead be invasive breast cancer, which has grown into nearby breast tissue.

The visible changes can look like eczema or another common skin condition. This can delay diagnosis, especially if a cream briefly improves the irritation. A persistent change affecting one nipple should therefore be assessed, even if it is not painful.

Paget's disease can occur in women and men. It is not the same as Paget's disease of bone, which is an unrelated condition.

Symptoms

Symptoms usually start in one nipple. Changes may then spread to the areola. Both breasts are rarely affected at the same time.

Possible symptoms include:

Early changes may be mild. The skin can appear dry or irritated before more obvious crusting develops.

Eczema often affects other areas of skin or both nipples, while Paget's disease usually affects one nipple and remains there. Appearance alone cannot confirm the cause, however. A biopsy is needed to identify Paget cancer cells.

- Red, pink, scaly, flaky, or thickened nipple skin
- Crusting, oozing, or a sore that does not heal
- Itching, tingling, burning, tenderness, or pain
- Clear, yellow, or blood-stained nipple discharge
- A flattened or newly pulled-in nipple
- A lump or area of thickening in the breast
- Skin changes around the nipple that improve and return

Causes and risk factors

Paget's disease develops when cancer cells collect in the outer layer of the nipple skin.

In most cases, the cells are thought to travel along the milk ducts from an underlying breast cancer. Less often, no deeper tumour is found. Researchers have proposed that, in those cases, cells in the nipple skin may have become cancerous there.

The exact reason one person develops the condition is usually unknown. Paget's disease is not caused by eczema, infection, injury, or anything you did to the nipple.

Risk factors generally overlap with those for other breast cancers. They can include increasing age, a personal or strong family history of breast cancer, certain inherited gene changes, previous radiation to the chest, and some patterns of hormone exposure. Having a risk factor does not mean you will develop Paget's disease, and some people have no known risk factors.

The condition itself is not directly passed from parent to child. However, an inherited breast cancer gene change may contribute to the wider risk of breast cancer in some families.

Diagnosis

A healthcare professional will ask how long the nipple change has been present and whether you have noticed discharge, a lump, or symptoms elsewhere. They will examine both breasts and the lymph nodes under the arm and near the collarbone.

A biopsy confirms the diagnosis. During a biopsy, a small sample of nipple or areola tissue is removed and examined under a microscope. This may be done as a punch, shave, or wedge biopsy. A wedge biopsy takes a deeper sample that may include part of a milk duct.

Breast imaging is used to look for cancer below or elsewhere in the nipple and breast. Tests may include:

A normal mammogram does not completely rule out Paget's disease. Further imaging or biopsy may still be needed when nipple changes remain suspicious.

If cancer is found, the laboratory checks its type and biological features. These can include hormone receptors and a protein called HER2. The results help guide treatment. Additional tests may be used to establish the stage, meaning the size and location of the cancer and whether it has spread.

- A mammogram, which is a low-dose breast X-ray
- Ultrasound, which uses sound waves to examine breast tissue and lymph nodes
- Magnetic resonance imaging, or MRI, in selected situations

Treatment and management

Treatment is planned around the extent of disease in the nipple and breast, whether cancer is invasive, lymph node findings, and the cancer's biological features. Your preferences and general health also matter.

Surgery is the main treatment. Some people can have breast-conserving surgery, which removes the nipple, areola, and affected tissue while preserving much of the breast. Radiation therapy is commonly considered after breast-conserving surgery to reduce the chance of cancer returning in the remaining breast.

A mastectomy removes the breast and may be recommended when cancer is widespread, there are several affected areas, or breast-conserving treatment is not suitable. Breast

reconstruction may be possible at the same operation or later. Nipple and areola reconstruction can also be discussed after healing.

A sentinel lymph node biopsy may be performed when invasive cancer is present or suspected, or when a mastectomy is planned. This procedure checks the first lymph nodes that breast cancer would be likely to reach.

Some people need treatment that travels through the body. This is called systemic treatment and may include:

Not everyone needs these treatments. They are selected according to the underlying breast cancer rather than the nipple symptoms alone.

Supportive care can help with pain, wound care, treatment side effects, body-image concerns, and emotional wellbeing. Your care team can also discuss fertility or menopause effects if proposed treatment could affect them.

- Hormone-blocking treatment for hormone-receptor-positive cancer
- HER2-targeted treatment for HER2-positive cancer
- Chemotherapy for some invasive cancers

Complications

Paget's disease may extend further into the breast than the skin changes suggest. Some people have an underlying invasive cancer or cancer in more than one part of the breast.

Without treatment, cancer can continue growing. Invasive cells may reach lymph nodes or other organs. The chance of this is influenced mainly by the underlying cancer's stage and biological features.

Possible complications of treatment include infection, bleeding, fluid collection, changes in breast shape or sensation, arm or shoulder stiffness, and swelling caused by lymph fluid. Radiation and cancer medicines have their own possible effects, which should be explained before treatment begins.

Cancer can also return in the breast, chest area, or elsewhere after treatment. Follow-up is intended to identify concerns and help manage lasting treatment effects. A new symptom does not automatically mean that cancer has returned.

Prevention

There is no proven way to prevent mammary Paget's disease specifically.

Because it is usually connected to another breast cancer, general steps that lower breast cancer risk may also lower overall risk. These can include limiting alcohol, staying physically active, and maintaining a weight that is healthy for you. These measures cannot guarantee prevention.

Breast screening does not prevent cancer, and Paget's disease may not always appear on a mammogram. Screening can still identify some associated breast cancers before symptoms develop. Follow the screening programme offered for your age, sex, medical history, and level of risk.

People with a strong family history or a known inherited gene change may be offered genetic counselling, additional screening, medicines, or risk-reducing surgery. These are individual decisions rather than routine prevention for everyone.

Living with it and what to expect

The course over months and years depends mainly on whether there is underlying invasive cancer, its stage, and its response to treatment. Paget's disease limited to the nipple and nearby ducts is often treated successfully. A breast lump, affected lymph nodes, or spread beyond the breast usually means more extensive treatment and a less favourable outlook.

Initial recovery may involve wound care, tiredness, discomfort, and changes in arm movement. Recovery time differs according to the operation and whether you receive radiation or systemic treatment. Rehabilitation exercises may help restore shoulder movement after surgery.

Treatment can change the appearance and sensation of the breast or chest. Loss of the nipple may affect body image, confidence, sexuality, or how clothing feels. Reconstruction, prostheses, counselling, and peer support are options, but there is no single right choice.

Follow-up continues after active treatment. Appointments may include examination of the breast or chest area, discussion of side effects, and mammograms of any remaining breast tissue. Report new changes between scheduled appointments rather than waiting for the next routine visit.

Many people return to work, exercise, relationships, and usual activities after recovery. Some continue to manage fatigue, altered sensation, swelling, or the emotional effects of cancer. Support remains appropriate even years after treatment.

When to get medical help

Arrange a medical appointment promptly if you have a nipple rash, crusting, discharge, flattening, or soreness that is new, affects one side, or does not settle. You should also be assessed for a new breast lump or thickening.

These symptoms have many possible causes and are often not due to cancer. However, persistent one-sided nipple changes need examination. Do not repeatedly treat them as eczema without medical review.

If you have already been treated, contact your care team about a new breast or chest-wall change, swelling of the arm, persistent bone pain, unexplained weight loss, or a new symptom that does not improve. These concerns usually need timely assessment but are not automatically emergencies.

Seek urgent medical care for a surgical wound that becomes increasingly red, hot, swollen, or painful, especially with fever or pus.

Call emergency services for severe breathing difficulty, sudden chest pain, fainting, confusion, or bleeding that will not stop. These are not typical early signs of Paget's disease but may signal a serious treatment complication or another emergency.

Common questions

Is mammary Paget's disease a type of breast cancer?

Yes. It is a breast cancer involving the skin of the nipple. Most people also have DCIS or invasive cancer deeper in the same breast.

Can it look like eczema?

Yes. It may cause redness, scaling, itching, or crusting that resembles eczema. Paget's disease is more likely to persist on one nipple. A biopsy, not appearance alone, confirms the cause.

Can I have Paget's disease without a breast lump?

Yes. Many people do not feel a lump. When a lump is present, an underlying invasive cancer is more likely, but imaging and biopsy are needed to determine what is there.

Will I need a mastectomy?

Not always. Breast-conserving surgery may be possible when the affected area can be removed with clear edges and acceptable breast appearance. The location and extent of the underlying cancer guide this decision.

Can Paget's disease spread?

The nipple condition may be linked to invasive breast cancer, which can spread to lymph nodes or other organs. Paget cells confined to the surface and ducts do not behave in the same way as invasive cancer.

Can men get mammary Paget's disease?

Yes, although it is uncommon. Persistent nipple changes in a man also require assessment and may need imaging and biopsy.

Sources

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