CONDITION

Peripartum cardiomyopathy

Peripartum cardiomyopathy is heart muscle weakness that develops late in pregnancy or after childbirth.

WHAT IT IS
Heart muscle weakness around childbirth

BODY SYSTEM
Heart and circulation

MAIN SYMPTOMS
Breathlessness, swelling, fatigue, fast or irregular heartbeat

WHAT CAUSES IT
Uncertain; hormonal, vascular, immune, and genetic factors

HOW IT IS DIAGNOSED
Echocardiogram and tests excluding other causes

MAIN TREATMENT
Heart failure medicines and specialist cardiac care

CAN IT BE CURED?
Sometimes - heart function fully recovers

IS IT AN EMERGENCY?
Sometimes - sudden severe breathlessness requires emergency care

LONG-TERM OUTLOOK
Many recover; some develop lasting heart failure

Overview

Peripartum cardiomyopathy is a condition in which the heart muscle becomes weak around the time of childbirth. It usually appears during the last month of pregnancy or within the first few months after delivery, although it can sometimes be recognised later.

A weakened heart cannot pump blood around the body as effectively as usual. This is called heart failure . Heart failure does not mean that the heart has stopped. It means that the heart needs support to meet the body's needs.

Doctors assess pumping strength using a measurement called the left ventricular ejection fraction , or LVEF. This is the percentage of blood pushed out of the heart's main pumping chamber with each beat. In peripartum cardiomyopathy, the LVEF is usually below 45%.

The condition matters because symptoms can worsen quickly in some people. However, recovery is possible. Some people regain normal heart function, while others need ongoing treatment for long-term heart failure.

Symptoms

Symptoms may begin gradually or come on over a short period. They can be difficult to recognise because breathlessness, tiredness, and ankle swelling are also common during late pregnancy and early recovery from childbirth.

Possible symptoms include:

Symptoms that are new, getting worse, or more severe than expected after childbirth need medical assessment. You do not need to decide whether they are a normal part of pregnancy or recovery before seeking help.

- Shortness of breath during activity or while resting
- Difficulty breathing when lying flat
- Waking at night feeling breathless
- Swelling of the feet, ankles, legs, or abdomen
- Unusual or severe tiredness
- A fast, pounding, or irregular heartbeat
- A persistent cough, particularly at night
- Chest pressure, discomfort, or pain
- Rapid weight gain caused by fluid retention
- Dizziness, faintness, or reduced ability to exercise

Causes and risk factors

The exact cause of peripartum cardiomyopathy is not fully understood. It is likely to result from several processes rather than one cause.

Pregnancy places extra demands on the heart and blood vessels. Hormonal changes, inflammation, injury to small blood vessels, and abnormal responses to a hormone called prolactin may contribute. Prolactin helps the body produce breast milk.

Genetic susceptibility can also play a part. Some people with peripartum cardiomyopathy have

gene changes also found in other forms of dilated cardiomyopathy, in which the heart becomes enlarged and weak. This does not mean that every case is inherited or that a child will develop the condition.

Factors associated with a higher chance of peripartum cardiomyopathy include:

Having one or more risk factors does not mean that you will develop the condition. It can also occur without any known risk factor.

- Previous peripartum cardiomyopathy
- Twin or other multiple pregnancy
- Preeclampsia or high blood pressure during pregnancy
- Several previous pregnancies
- Older maternal age
- Treatment with certain medicines to delay premature labour
- African ancestry

Diagnosis

There is no single blood test that confirms peripartum cardiomyopathy. Diagnosis is based on symptoms, reduced heart pumping function, the timing around pregnancy, and the absence of another clear explanation.

An echocardiogram is the main test. It uses sound waves to create moving images of the heart. It can show the heart's size, pumping strength, valve function, and whether there may be a blood clot inside the heart.

Other tests may include:

Doctors must also consider other conditions that can cause similar symptoms. These include a blood clot in the lungs, heart attack, preeclampsia, severe anaemia, infection, thyroid disease, and previously unrecognised heart disease.

- An electrocardiogram, or ECG, to record the heart's electrical activity
- Chest imaging to look for fluid in the lungs or another cause of symptoms
- Blood tests for heart strain, anaemia, infection, thyroid problems, and organ function
- Heart rhythm monitoring if palpitations or fainting have occurred
- Cardiac MRI for more detailed images in selected cases

Treatment and management

Treatment aims to reduce strain on the heart, remove excess fluid, prevent complications, and support recovery. Care usually involves cardiology and maternity specialists. Severe illness may require treatment in hospital.

Medicines commonly used for heart failure may include diuretics like furosemide or hydrochlorothiazide , which help the body remove excess fluid, and medicines that slow the heart or reduce the pressure it pumps against. The exact options differ during pregnancy and after delivery because some heart medicines can affect a developing baby or pass into breast milk.

Medicines known as ACE inhibitors like lisinopril or ramipril, angiotensin receptor blockers, and related treatments are generally avoided during pregnancy. They may become options after delivery following an individual review. Breastfeeding plans, kidney function, blood pressure, and other health needs all influence medicine choice.

Blood-thinning treatment may be considered if the heart is severely weak, a clot is found, or another clotting risk is present. This reduces the chance of a clot travelling to the lungs or brain but also increases bleeding risk.

Bromocriptine, a medicine that suppresses prolactin and stops milk production, is used in selected cases in some specialist centres. Its role continues to be studied, and it is not routine treatment everywhere.

People at risk of a dangerous heart rhythm may sometimes use a wearable defibrillator while doctors wait to see whether heart function improves. A permanent implanted defibrillator may be considered if severe weakness continues.

If medicines are not enough, temporary mechanical support can help the heart pump. Heart transplantation is rarely needed but may be considered for life-threatening heart failure that does not recover.

Complications

Peripartum cardiomyopathy can cause fluid to build up in the lungs, making breathing difficult. Fluid may also collect in the legs or abdomen.

Other possible complications include:

Serious complications are more likely when heart function is very low at diagnosis, the heart is greatly enlarged, or treatment is delayed. These findings do not predict an individual's outcome with certainty.

- Persistently reduced heart function
- Abnormal heart rhythms
- Blood clots in the heart
- Stroke or a clot in the lungs
- Leaking heart valves caused by enlargement of the heart
- Cardiogenic shock, in which the heart cannot supply enough blood to organs
- The need for mechanical heart support or transplantation

Prevention

There is no proven way to prevent every case because the cause is not fully understood. Routine healthy pregnancy care cannot guarantee that peripartum cardiomyopathy will not occur.

Managing high blood pressure and attending pregnancy and postnatal appointments may help identify cardiovascular problems earlier. New or worsening breathlessness should not be dismissed simply because it occurs during pregnancy.

A future pregnancy can trigger another episode, including after heart function has returned to normal. The risk is higher if heart function remains reduced. Pregnancy is generally strongly discouraged when significant heart weakness continues.

Before another pregnancy, specialist assessment can help explain the personal risks, review medicines, and plan monitoring. Reliable contraception is important while pregnancy would be medically unsafe or while taking medicines that could harm a developing baby.

Because genetic factors sometimes contribute, genetic counselling or testing may be offered when there is persistent cardiomyopathy or a family history of heart muscle disease, heart failure, or unexplained sudden death.

Living with it and what to expect

Recovery differs from person to person. Improvement often occurs during the first six months, but heart function can continue to change for a year or longer. Some people regain normal pumping function. Others develop stable, long-term heart failure, and a smaller group remains seriously unwell.

Follow-up usually includes repeat echocardiograms, blood pressure checks, symptom reviews,

and adjustments to treatment. Even after heart function returns to normal, medicines should not be stopped without specialist advice. Stopping too early may increase the chance of the heart weakening again.

At first, fatigue may come from both the heart condition and the physical demands of recovering from childbirth. Support with infant care, meals, and household tasks can make rest and treatment easier.

Activity is often increased gradually once symptoms are controlled. Cardiac rehabilitation may provide supervised exercise and advice about returning to daily activities. Sudden strenuous exercise is not appropriate while heart failure remains unstable.

Breastfeeding is possible for some people, but the decision is individual. It may be affected by the severity of the condition and the medicines needed. A clinician or pharmacist can check each medicine rather than assuming that all heart treatments require breastfeeding to stop.

Anxiety about recovery or another pregnancy is understandable. Emotional support, counselling, and contact with others who have experienced pregnancy-related heart disease may help alongside medical care.

When to get medical help

Arrange prompt medical assessment if you are pregnant or recently gave birth and develop new breathlessness, increasing swelling, unusual exhaustion, palpitations, or difficulty breathing when lying flat. These symptoms are not always caused by peripartum cardiomyopathy, but they deserve assessment.

If you have already been diagnosed, contact your care team promptly if symptoms return, swelling increases, your weight rises quickly from fluid, or you are struggling with ordinary activities. These are reasons for earlier review rather than waiting for a routine appointment.

Call emergency services for:

Do not drive yourself if symptoms are severe.

- Sudden or severe difficulty breathing
- Chest pain or pressure
- Fainting or near-fainting
- Coughing up pink, frothy fluid
- New weakness on one side, facial drooping, or trouble speaking
- Severe confusion, cold clammy skin, or extreme weakness

- A sustained very fast or irregular heartbeat with dizziness or breathlessness

Common questions

Can peripartum cardiomyopathy go away completely?

Yes, some people regain normal heart pumping function. Recovery may take months and cannot be predicted with certainty at diagnosis. Regular echocardiograms show whether the heart is improving. Continued follow-up is important even after apparent recovery.

How soon after giving birth can peripartum cardiomyopathy happen?

It most often develops during the final month of pregnancy or within the first few months after childbirth. Similar pregnancy-associated heart weakness can be recognised later, so the timing alone should not rule out assessment of concerning symptoms.

Can I breastfeed with peripartum cardiomyopathy?

Breastfeeding may be possible, but it needs an individual medicine review. Some heart medicines are compatible with breastfeeding, while others require an alternative or closer monitoring. Bromocriptine stops milk production if it forms part of treatment.

Can I have another baby after peripartum cardiomyopathy?

Another pregnancy carries a risk of the condition returning. The risk is greatest when heart function has not recovered, and pregnancy may then be unsafe. Even after full recovery, recurrence remains possible. A cardiology and high-risk pregnancy review is recommended before trying to conceive.

Is peripartum cardiomyopathy inherited?

It is not always inherited. Some people have gene changes linked to other heart muscle conditions, but many do not. Genetic counselling may be useful if heart weakness persists or close relatives have cardiomyopathy, heart failure, or unexplained sudden death.

How is this different from normal postpartum tiredness and swelling?

Normal recovery can involve fatigue and mild ankle swelling. Peripartum cardiomyopathy is more likely to cause worsening breathlessness, difficulty lying flat, marked swelling, rapid fluid-related weight gain, chest symptoms, or a fast or irregular heartbeat. Medical testing is needed to identify the cause.

Sources

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