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Ventricular tachycardia

Ventricular tachycardia (VT) is a rapid heartbeat that starts in the lower chambers of the heart (ventricles).

Causes

Ventricular tachycardia is a pulse rate of more than 100 beats per minute, with at least three irregular heartbeats in a row.

The condition can develop as an early or late complication of a heart attack. It may also occur in people with:

- Cardiomyopathy
- Heart failure
- Heart surgery
- Myocarditis
- Valvular heart disease

Ventricular tachycardia can occur without heart disease.

Scar tissue may form in the muscle of the ventricles days, months, or years after a heart attack. This can lead to ventricular tachycardia.

Ventricular tachycardia can also be caused by:

- Anti-arrhythmic drugs (used to treat an abnormal heart rhythm)
- Changes in blood chemistry (such as a low potassium level)
- Changes in pH (acid-base)

- Lack of enough oxygen

"Torsade de pointes" is a form of ventricular tachycardia. It is often due to congenital heart disease or the use of certain medicines.

Symptoms

You may have symptoms if the heart rate during a ventricular tachycardia episode is very fast or lasts longer than a few seconds. Symptoms may include:

- Chest discomfort (angina)
- Fainting (syncope)
- Light-headedness or dizziness
- Sensation of feeling the heart beat (palpitations)
- Shortness of breath

Symptoms may start and stop suddenly. In some cases, there are no symptoms.

Exams and Tests

The health care provider will look for:

- Absent pulse
- Loss of consciousness
- Normal or low blood pressure
- Rapid pulse

Tests that may be used to detect ventricular tachycardia include:

- Continuous ambulatory electrocardiogram (Holter monitor)
- ECG
- Intracardiac electrophysiology study (EPS)
- Rhythm monitoring with a loop recorder or device

You may also have blood chemistries and other tests.

Treatment

Treatment depends on the symptoms, and the type of heart disorder. Some people may not need treatment.

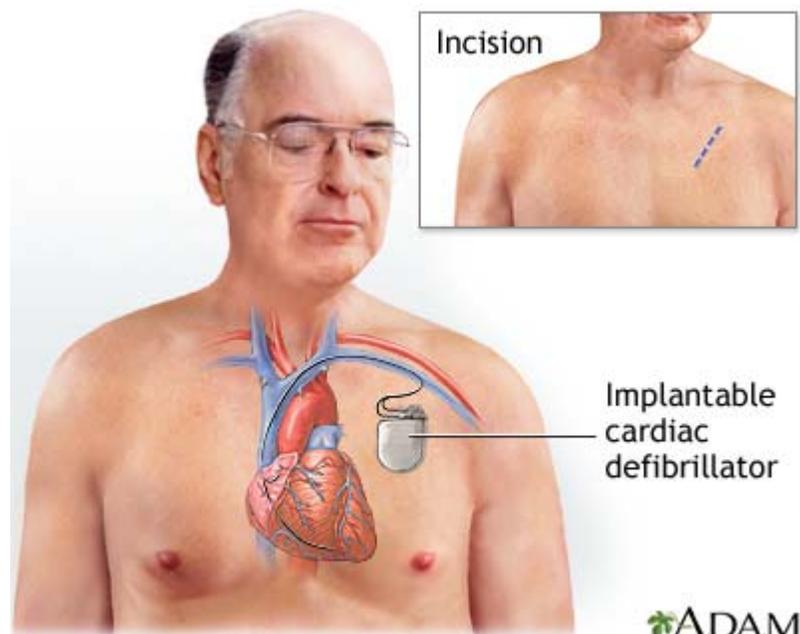
If ventricular tachycardia becomes an emergency situation, it may require:

- CPR
- Electrical defibrillation or cardioversion (electric shock)
- Anti-arrhythmic medications (such as lidocaine, procainamide, sotalol, or amiodarone) given through a vein

Oral anti-arrhythmic medications (such as procainamide, amiodarone, or sotalol) may be needed for long-term treatment of ventricular tachycardia. However, these drugs may have severe side effects. They are being used less often as other treatments are developed.

Some ventricular tachycardias may be treated with a procedure to destroy the tissue that is causing the irregular heartbeat (ablation). Radiofrequency catheter ablation can cure certain tachycardias.

A treatment that is often used for chronic (long-term) ventricular tachycardias consists of implanting a device called an implantable cardioverter defibrillator (ICD). The ICD is most often implanted in the chest, like a pacemaker. It is connected to the heart with wires.



The ICD is programmed to detect when an abnormal heartbeat is occurring. It then sends out an electric shock to stop it. The ICD may also be programmed to send a series of rapid beats to interrupt the ventricular tachycardia. You may need to take anti-arrhythmic drugs to prevent the ICD from repeatedly firing.

Outlook (Prognosis)

The outcome depends on the heart condition and symptoms.

Possible Complications

Ventricular tachycardia may not cause symptoms in some people. However, it can be deadly. It is a major cause of sudden cardiac death.

When to Contact a Medical Professional

Go to the emergency room or call the local emergency number (such as 911) if you have a rapid, irregular pulse; faint, or have chest pain. All of these may be signs of ventricular tachycardia.

Prevention

The disorder cannot be prevented in some cases. In other cases, it can be prevented by treating heart problems and avoiding certain medicines.

Alternative Names

Wide-complex tachycardia; V tach; Tachycardia - ventricular

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Update Date 5/13/2014

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U.S. Department of Health and Human Services National Institutes of Health
Page last updated: 07 June 2016