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Thoracic Aortic Aneurysm

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An expansion, or ballooning, of a section of the aorta within your chest (thorax) that slowly degenerates. The aorta, the body's main blood vessel, starts at your heart and extends all the way to your pelvis, where it branches toward your legs. The larger the aneurysm, the higher the risk it may rupture, leading to damage of the aortic wall and bleeding that could cause death.

RARELY OCCUR

Thoracic aortic aneurysms are rare, occurring in approximately 6-10 per every 100,000 people. About 20% of those cases are linked to family history. Your risk is higher if you have certain genetic syndromes (see "Causes" below), as you age, if you smoke and if you have high blood pressure.

MAY REQUIRE SURGERY

Surgery is offered when the risk of rupture is greater than the risk of the operation. The procedure is called open thoracic aortic aneurysm repair or TAA.

Sometimes misnamed a thoracic aortic dissection, which represents a different process that causes a tear in the wall of the aorta. This can be caused by an aneurysm or can occur spontaneously and develop into an aneurysm.

Symptoms

MAY BE ABSENT

Thoracic aortic aneurysms tend to develop and expand slowly over time. In most cases, these aneurysms rarely cause any symptoms, and are discovered when you are tested for other reasons.

RARELY, HOARSENESS OR DIFFICULTY SWALLOWING

Though rare, if a thoracic aortic aneurysm grows large enough, it can compress nearby structures. For example, your voice may become hoarse or you may have difficulty swallowing.

RARELY, PAIN

In rare cases thoracic aortic aneurysms cause pain, usually a tearing or sharp, severe pain between the shoulder blades. Pain tends to occur when an aneurysm grows quickly or ruptures, or if the aorta wall develops a tear.

Causes

We do not completely understand why thoracic aortic aneurysms develop.

Thoracic aortic aneurysms run in some families for no apparent reason; this represents about 20% of all cases. These aneurysms are also linked to known genetic syndromes, most commonly to Marfan Syndrome but also to Ehlers-Danlos Syndrome, Loeys-Dietz Syndrome and Turner Syndrome.

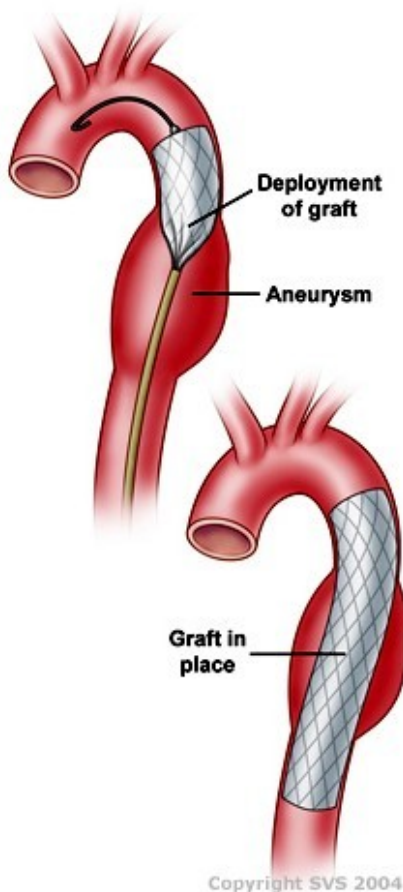
Diagnosis

Thoracic aortic aneurysms are frequently identified incidentally, when you are tested for other reasons.

In some instances, a thoracic aortic aneurysm can be detected on a routine X-ray. Advanced imaging tests such as a computed tomography (CT) scan or magnetic resonance imaging (MRI) provide more information.

Treatments

The size of the aneurysm, presence and severity of symptoms, and the risk of surgery help determine the treatment approach.



REGULAR MONITORING is standard treatment for smaller aneurysms that do not require surgery. Plan on visiting your vascular surgeon regularly—usually once a year or every 6 months, depending on the size of the aneurysm—for a computed tomography (CT) scan or MRI to check the status and growth of the aneurysm.

CONVENTIONAL SURGERY, a procedure called open thoracic aortic aneurysm repair or **TAA**, is done under a general anesthetic.

Through an incision along the side of the chest, a vascular surgeon uses special surgical tools to stop blood flow in the aorta above and below the aneurysm.

The section of the aorta with the aneurysm is replaced with an artificial graft.

The graft is sewn in place with fine stitches, and the incision is closed.

Most patients spend some time in the intensive care unit after surgery, and stay in the hospital 7-10 days.

ENDOVASCULAR TREATMENT is sometimes used and represents a less invasive approach. Thoracic aortic endograft repair (**TEVAR**) treats the aneurysm with a small device placed inside the aorta through a small incision or through puncture in the groin.

Staying Healthy

- Although no specific therapy or lifestyle change can prevent aneurysms from developing, maintaining good overall health is beneficial.
- If aneurysms run in your family, get a screening evaluation to see if you are affected.
- Keep a close watch on blood pressure; if needed, get help to control it.
- If you smoke, ask your vascular surgeon to help you find a smoking cessation program that will work for you. Abstaining from smoking may help prevent the development of an aneurysm.
- If you have an aneurysm, keep up with regular screening to assess growth.