Arterial dissection

Arterial dissection refers to a tear or separation in the layers of an artery's wall, resulting in the formation of a false lumen within the vessel. It is most commonly seen in the carotid and vertebral arteries, which supply blood to the brain. Arterial dissections can also occur in other arteries throughout the body.

The exact cause of arterial dissection is not always clear, but it is often associated with trauma or underlying connective tissue disorders. In cases of traumatic arterial dissection, it can result from sudden movements, whiplash injuries, sports-related trauma, or motor vehicle accidents. Connective tissue disorders such as Ehlers-Danlos syndrome or Marfan syndrome can weaken the arterial walls, making them more susceptible to tearing.

The symptoms of arterial dissection can vary depending on the location and extent of the dissection, as well as the degree of blood flow compromise. Common symptoms include:

Neck or head pain: A sudden, severe, and persistent headache or neck pain is a frequent symptom. Neurological deficits: Dissections in the carotid or vertebral arteries can cause transient ischemic attacks (TIAs) or strokes, leading to symptoms such as weakness or paralysis on one side of the body, difficulty speaking, vision changes, or loss of coordination. Horner's syndrome: Dissection of the carotid artery may result in a combination of symptoms including drooping of the eyelid, a constricted pupil, and decreased sweating on one side of the face. Pulsatile tinnitus: Some individuals may experience a ringing or whooshing sound in the ear due to disturbed blood flow caused by arterial dissection. Diagnosing arterial dissection can be challenging, as symptoms may mimic other conditions. However, various imaging techniques can help in its identification, including:

Magnetic Resonance Imaging (MRI): This imaging modality can provide detailed images of the blood vessels and detect abnormalities in the arterial walls. Computed Tomography Angiography (CTA): It involves injecting a contrast dye and taking X-ray images to visualize the blood vessels and identify dissections. Doppler Ultrasound: This non-invasive test uses sound waves to evaluate blood flow and identify any abnormalities or changes in the arterial walls. Conventional Angiography: Although less commonly used nowadays, it may be performed in specific cases to provide a more detailed visualization of the arterial anatomy. Treatment for arterial dissection aims to prevent complications and restore blood flow. The approach may involve medical management with antiplatelet or anticoagulant medications to prevent clot formation or surgical interventions, such as endovascular repair or open surgery, depending on the location and severity of the dissection.

Prompt diagnosis and appropriate treatment are crucial in arterial dissection cases to prevent stroke or other serious complications. If you suspect an arterial dissection, it is important to seek immediate medical attention.

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Carotid artery dissection

see Carotid artery dissection.