Vertebral Artery Injuries in Trauma

Two vertebral arteries are located on either side of your neck. They provide blood supply to the tissues there. They also provide some blood to the brain. Injuries to or near your spinal column in your neck can injure these arteries. This can cause swelling and bleeding which may compress the many nerves that make up your spinal cord and prevent blood flow to the spinal cord or brain.

What are the causes?

- A blunt, powerful blow to the neck.
- Hyperextension, such as whiplash.
- Piercing neck injuries (gun shot or stabbing)

What are the symptoms?

Many times there are no symptoms of this type of injury. This makes it hard to diagnose. If the injury is severe, you
- May be drowsy.
- Have a hard time swallowing.
- Have a headache, neck pain, dizziness, ringing in the ears.
- Have problems with vision.
- Have swelling or bruising in the area you were injured.

What tests will be done?

An angiogram or arteriogram is an x-ray or scan of your arteries. Contrast dye will be injected to make the arteries easier to see. Blood will be taken for testing. Other scans may be done such as a CT scan, MRI or ultrasound.

How are vertebral artery injuries treated?

The health care team watches for any neurological effects such as loss of movement or feeling.
**Anticoagulation and antiplatelet medicines** are used. Aspirin is an antiplatelet. Heparin and warfarin (Coumadin®) are the names of common anticoagulants. These are medicines that prevent your blood from clotting and blocking off a blood vessel. You may be on a **heparin drip** which means you will get heparin through an IV. Your blood will be drawn often to ensure you are getting the proper amount of the drug. Heparin can also be given with a shot. Aspirin and warfarin are taken as a pill.

You may have **surgery** to repair your injured blood vessels if needed.

If the vessel is completely blocked there is no surgical option and health care team will manage you symptoms.

After you leave the hospital, you will follow-up with your doctor for further testing to decide if more treatment is needed. You will likely keep taking anticoagulants as ordered by your doctor. You may have to have blood drawn often to be sure you are getting the proper amount. There may be another scan done in a few months to look at your arteries again.

**What complications may occur?**

- Anticoagulants increase bleeding. Symptoms of this are bruises, bloody nose, and blood in your spit, urine, or stool. A dangerous type of bleeding can occur around your brain. Your caregivers in the hospital may give you more fluids or blood through an IV. Tests may be done to see if there is bleeding inside your body that cannot be seen.

- If the injured artery is stopping blood flow to the brain, you may have symptoms of a stroke. These include facial numbness, drooping, weakness, loss of feeling to one side of the body, trouble swallowing, or vision changes.

- Your doctor will have to balance the risk of bleeding with the risk of stroke in order to plan the best treatment.

- At home, avoid bleeding. Use an electric razor, soft toothbrush, avoid high-contact sports, and take all medicines as directed.

**When should I call my doctor?**

- Severe or increasing headaches
- Changes in your vision
- Continued nausea or vomiting
- Increased sleepiness
- Change in behavior
- Problems with walking or balance
- Any drainage from your incision or any signs of infection (increased redness, swelling, drainage, increase in pain, fever greater that 100 F
- Dizziness
- Changes in speech

**Phone Numbers**

Patients of the Neurosurgery clinic **(608)263-7502**

After hours, nights, weekends and holidays, this will give you the paging operator. Ask for the resident on call for your clinic. Leave your name and phone number with the area code. The doctor will call you back.

If you live out of the area, please call **1-800-323-8942** and ask for your clinic.