Vertebral Artery Injuries in Trauma

There are two vertebral arteries on each side of your neck. They provide blood supply to the tissues there. They also provide some blood to the brain. Injuries 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. This can 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 used 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 an ultrasound.

How are vertebral artery injuries treated?
The health care team watches for any effects on the nerves such as loss of movement or feeling.

We often need to prevent blood clots with this type of injury. Aspirin, heparin and warfarin (Coumadin®) are the names of common medicines used. These medicines prevent your blood from clotting and blocking off a blood vessel. Heparin can be given as a shot, or through the IV. Aspirin and warfarin are taken as a pill. Frequent blood tests may be needed when these medicines are used, to insure that your blood stays in a safe range.

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

If the vessel is fully blocked, surgery is not an option. Your health care team will manage your 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 blood thinners. You may need 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 may increase bleeding. Minor symptoms of this are: bruises, bloody nose, and blood in your spit. Dangerous type of bleeding can occur around your brain, or in your gut, or kidneys. You will call the doctor if you see blood in urine, stool or if you have a sudden headache that is not normal for you. 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 sudden onset facial numbness, drooping, weakness, loss of feeling to one side of the body, trouble swallowing, or vision changes. You should call a doctor or call 911 if new symptoms like these occur.

- Your doctor will 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: Call (608)263-7502.
- After hours, nights, weekends and holidays, call UW Hospital Paging Operator at 608-262-0486. Ask for the resident on call for you 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.