AA and OA Injections

NOTE: Only MDs or DOs Trained in Pain Medicine Should Administer These Injections

The AA joints (atlanto-axial joints) and the OA (occipito-atlantus joints) are the uppermost joints in the spine lying just below the head. Either joint can develop arthritis pain due to cartilage damage, trauma, osteoarthritis, rheumatoid arthritis, or other causes. The AA joint is primarily a joint that allows the head to rotate back and forth, as in shaking your head “no”. The OA joint on the other hand, is primarily responsible for motion of shaking the head “yes”. Pain produced primarily during either of these movements may suggest the presence of arthritis or other dysfunction of these joints. There are other structures located nearby that can also transmit similar pain, therefore it may require several different injections to make the appropriate diagnosis. AA and AO injections are performed to determine the “pain generator”, or that are of the neck transmitting the pain. These precision injections must be performed only by experienced physicians and under direct fluoroscopic x-ray guidance due to the number of important structures nearby. Once the diagnosis is made, other therapies may be considered.

- **How Is the Injection Performed?** Usually the patient is placed face down on a soft table, the back of the head prepped with alcohol or iodine solution, then x-ray fluoroscopy is used to identify the joint of interest. After local anesthesia infiltration, a thin needle is placed into the skin and is advanced under direct x-ray guidance into the joints. It is important to remain completely still and to inform the pain doctor of any unusual sensations. Once the joint is identified, a iodine containing contrast agent is injected into the joints to outline them. Then, a local anesthetic is injected (sometimes with a steroid) into the joint, then the needle is removed. If the patient receives significant relief (more than 80%) for any period of time after the injection, the diagnosis is made. Afterwards, the pain physician may refer you on for physical
therapy, provide you with repeated injections into the joints, refer you to a surgeon, or begin other therapies.

- **DOES THE INJECTION HURT?** Usually the actual injection does not hurt significantly because only a thin needle is used.
- **RISKS:** bleeding, infection, nerve injury, injury to the vertebral artery or spinal cord, spinal headache, need for urgent surgery, and stroke are all uncommon.
- **SPECIAL INSTRUCTIONS:** You may eat and drink on the day of the procedure and should take all your normal medications except those listed below. You need a driver with you to transport you home after the procedure.
- **MEDICINES TO BE STOPPED IN ADVANCE:** Stop Plavix (clopidogrel) 7 days before the procedure. Stop coumadin and warfarin 5 days before the procedure. Stop Ticlid (ticlopidine) 14 days before the procedure.
- **RISKS:** Bleeding, infection, abscess, nerve injury, spinal injury are all very rare.
- **AFTER THE PROCEDURE:** You will be in our clinic for about 20-30 minutes after the procedure and will have your pain and function assessed at that time. You should not have new arm or leg weakness or significant numbness at the time of discharge.
- **DISCHARGE INSTRUCTIONS:**
  - Activity: Resume normal activity today.
  - Diet: Resume normal diet.
  - Medications: Resume normal medications unless otherwise instructed.
  - Dressing: You may have a small bandaid or band aids placed over the injection site. This can be removed the next day.
  - Discomfort at the Injection Site: If there is discomfort at the injection site, apply ice wrapped in a washcloth for short periods of time (20 minutes per hour) during the first 24 hours, then apply low to medium heat.
  - IV Site: If you had an IV site, there may be soreness and bruising around the site that will go away in a few days. A warm moist cloth placed over the area for half-hour periods several times a day will sometimes help. Increased tenderness or red streaking around the area of the IV site or increasing swelling of the hand requires attention. Our clinic needs to be notified if this occurs.
  - Side Effects: Possible side effects of local anesthetics used include numbness. Let us know if this occurs. If you experience new onset severe generalized weakness during the first week after the injection, call our office. If you develop fever of more than 102 degrees during the first few days after the injection or severe increase in pain in the neck, notify our office.
  - Return to Normal Activities: You may experience some numbness in the skin over the neck during the first several hours. Relief from the diagnostic injection may last up to 12 hours or longer.