STANDARDIZED PROCEDURE
GREATER OCCIPITAL NERVE INJECTIONS (Adult, Peds)

I. Definition:

The goal of the greater occipital nerve (GON) injection is to provide headache relief that can last for a few weeks to a few months. This can be helpful in breaking a headache cycle or when patients are weaning off medications or tapering up on headache preventive medication doses.

The GON injection may be performed by an Advanced Health Practitioner (AHP) who has been adequately trained and supervised in this procedure.

II. Background Information

A. Setting: This procedure is done in the outpatient setting. The population (adults vs. pediatrics) for the Advanced Health Practitioner is determined by the approval of the privileges requested on the AHP privilege Request Form. If the procedure is being done on a pediatric patient, make sure to use age appropriate language and age appropriate developmental needs with care of children, as appropriate to the situation, as well as weight-based dosing of medications for children <40 kg.

B. Supervision:

The necessity of the procedure will be determined by the AHP in collaboration with the supervising physician or his/her designee. Designee is defined as another attending physician who works directly with the supervising physician.

Direct supervision by an attending physician or his/her designee will not be necessary once competency is determined, as provided for in this procedure.

The AHP will notify the physician immediately upon being involved in any emergency or resuscitative events or under the following circumstances:

1. Patient decompensation or intolerance of the procedure
2. Bleeding that is not resolved
3. Outcome of the procedure other than expected

C. Indications:

1. Patients with chronic migraine or high frequency episodic migraine
2. Patients with chronic cluster headache, or currently in an episodic cluster bout
3. Patients with New Daily Persistent Headache
4. Patients with hemicrania continua

D. Precautions/Contraindications:

1. Allergies to steroid medications or lidocaine
2. Bleeding or clotting disorders
3. Patients receiving anticoagulant therapy
4. Cutaneous infection at the site of procedure
5. History of occipital skull fracture or occipital craniotomy

III. Materials

1. One 5 mL syringe
2. One 21G 1½-inch needle
3. One 23G 1½ -inch needle

4. One single-dose vial of 1mL depomedrol (methylprednisolone acetate) 80mg/mL
5. One single-dose vial of lidocaine 2% (20mg/mL).
6. One pair of non-sterile gloves
7. Three alcohol wipes
8. One 2x2 inch gauze or a cotton ball
9. One small round bandaid

IV. Procedure

A. Pretreatment evaluation

Patients with chronic migraine, New Daily Persistent Headache, or cluster headache who are not adequately controlled with medication.

B. Set up

Gather the necessary supplies.

C. Patient preparation

Review the potential benefits and side effects with the patient.

The GON injection can help break a headache cycle and provide headache relief for a few weeks to a few months. There is the potential for inefficacy, and patients will be advised of this. Injection site pain or soreness is the most common side effect. This is usually mild and temporary (lasting from a few hours to a few days). Some patients feel a little lightheaded or dizzy for 5-10 minutes after the injection. A very small amount of bleeding is common and normal after the injection. Some patients may get a temporary worsening of headache for several days, but that does not predict the outcome of the procedure. Tingling or numbness on the injected side can occur because of the lidocaine and lasts for a few hours. One rare (less than 1%) side effect is a dime sized loss of hair and/or loss of fatty tissue at the injection site. Also very rare would be injection site infection. Local injection of steroid does NOT cause the side effects associate with long term oral steroid usage (weight gain, moon face, insomnia, cataracts etc.).

D. Perform Procedure

1. Have the patient seated.
2. Palpate the left and right greater occipital nerve regions (the medial third of a line between the inion and mastoid process), one at a time. Identify the location of greatest tenderness to palpation. This will be the injection site.
3. Record the expiration dates and lot numbers of the medications and check that the medications are not expired. Draw up the two medications (1 mL depomedrol 80mg and 2mL lidocaine 2%) into a syringe using the 21G needle. Then change the needle to the 23G injection needle and clear the air out of the needle. Set the syringe down within easy reach of the patient. Put on gloves.
4. Relocate the injection site (see step 2 above) and clean the site with an alcohol wipe, then let it air dry.
5. Insert the needle with attached syringe into the previously located injection site until you hit the bone. Pull back the needle about 1 to 2mm, inject 1/3 of the medication, then pull back the needle about halfway. Reinsert the needle medially, inject another 1/3 of the medication, then pull back the needle halfway. Reinsert the needle laterally and inject the rest of the medication.
6. Withdraw the needle and apply pressure to the injection site with gauze or a cotton ball while rubbing in a circular motion. Hold pressure for several minutes until bleeding has stopped. Apply bandaid if needed.

E. Follow-up
The patient will be requested to email an update two weeks after the procedure of any headache improvement.

V. Documentation

A. Documentation is in the electronic medical record.
Record the indication for the procedure, site of injection, medications used, lot numbers and expiration dates, and any complications. The outcome will be documented based on patient's update two weeks after the procedure, or at the next clinic appointment.

B. All abnormal findings are reviewed with the supervising physician.

VI. Competency Assessment

A. Initial Competence

1. The Advanced Health Practitioner will be instructed on the efficacy and the indications of this therapy and demonstrate understanding of such.

2. The Advanced Health Practitioner will demonstrate knowledge of the following:
   a. Medical indications and contraindications of the procedure.
   b. Benefits and potential side effects of the procedure.
   c. Related anatomy and physiology.
   d. Consent process (if applicable).
   e. Steps in performing the procedure.
   f. Documentation of the procedure.

3. The Advanced Health Practitioner will observe the supervising physician/designee perform each procedure three times and perform the procedure three times under direct supervision.

4. The supervising physician will document the Advanced Health Practitioner's competency prior to performing the procedure without supervision.

5. The Advanced Health Practitioner will ensure the completion of competency sign off documents and provide a copy for filing in their personnel file and a copy to the medical staff office for their credentialing file.

B. Continued Proficiency

1. The Advanced Health Practitioner will demonstrate competence by successful completion of the initial competency.

2. Each candidate will be initially proctored and signed off by the supervising physician/designee. The Advanced Health Practitioner must perform this procedure at least three times per year. In cases where this minimum is not met, the supervising physician or designee must again sign off the procedure for the Advanced Health Practitioner. The Advanced Health Practitioner will be signed off after demonstrating 100% accuracy in completing the procedure.

3. Demonstration of continued proficiency shall be monitored through the annual evaluation.

4. A clinical practice outcomes log is to be submitted with each renewal of credentials. It will include the number of procedures performed per year and any adverse outcomes. If an adverse outcome occurred a copy of the procedure note will be submitted.

VII. Responsibility

Questions about this procedure should be directed to the Chief Nursing and Patient Care Services Officer at (415) 353-4380.

VIII. History of Policy

Written February 2014.