

STANDARDIZED PROCEDURE

MYRINGOTOMY (Adult, Peds)

I. Definition

Myringotomy is creation of a small incision into the tympanic membrane (TM) under otomicroscopic visualization with a speculum in the external auditory canal (EAC). After the TM has been incised, suction is used to remove any middle ear fluid. A ventilating tube may be inserted if it is desirable to maintain myringotomy patency beyond several days. The tube remains in situ for an average range of 6 to 24 months and then usually self-extrudes. This procedure is performed in awake adults (18 years of age or greater) in an outpatient setting under local anesthetic in order to drain or ventilate the middle ear. It is performed on children under general anesthesia via the same technique.

II. Background Information

A. Setting: The setting (inpatient vs outpatient) and population (adults vs pediatrics) for the Advanced Health Practitioner (AHP) 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 Child Life is involved and use age appropriate language and age appropriate developmental needs with care of children, as appropriate to the situation.

B. Supervision: The necessity of the procedure will be determined by the AHP in verbal collaboration with the attending physician or his/her designee. Direct supervision will not be necessary once competency is determined, as provided for in this procedure. At that time, general or indirect supervision is acceptable.

Designee is defined as another attending physician who works directly with the supervising physician and is authorized to supervise the AHP.

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

1. Patient decompensation or intolerance to the procedure
2. Bleeding that is not resolved
3. Difficult tube insertion or ear canal geometry
4. Outcome of the procedure other than expected

C. Indications:

Myringotomy is indicated in a patient with chronic (greater than 3 months duration of) Eustachian tube dysfunction that causes middle ear effusion or significant, chronic TM retraction, with conductive hearing loss. Myringotomy may also be performed in the setting of a prolonged or unresponsive acute otitis media, recurrent acute otitis media, or in a patient who plans airplane travel in the

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setting of a serous or purulent otitis media. Rarely, myringotomy is performed for patients receiving hyperbaric oxygen therapy or head and neck cancer treatments.

D. Precautions/Contraindications

Myringotomy is a procedure performed in an awake adult patient or anesthetized pediatric patient that requires thorough knowledge of anatomy of the external and middle ear. Precautions should be taken to avoid canal abrasion or placing myringotomy tube into the middle ear. Myringotomy is contraindicated with any sign of middle ear mass or vascular anomaly (glomus tumor, high-riding jugular bulb, or displaced internal carotid artery). Prior head and neck radiotherapy is a relative contraindication to myringotomy.

III. Materials

The otologic microscope and specula are utilized in this procedure and are available in the ambulatory OHNS clinic and operating room. Myringotomy in an awake patient requires the use of phenol, phenol applicator, myringotomy knife, suction and Frasier suction attachments, also readily available in both settings. Placement of ventilating tube(s) requires forceps and the tube implant(s).

IV. Myringotomy Procedure

A. Pre-treatment evaluation:

Patient's history is obtained and a preliminary external ear exam is performed. If desired, examination with a traditional otoscope may be performed prior to otomicroscopy for preliminary visualization of the canal and TM, though this step is often foregone.

B. Set up (if applicable):

Otomicroscopy is performed with patient in either a seated or reclined position with head tilted away from ear to be examined. Necessary materials are arranged on nearby equipment cart including suction.

C. Patient Preparation:

1. Informed consent is required, including ear-specific (unilateral or bilateral) designation.
2. Preparatory antibiotics are not required.

D. Procedure:

1. The patient is positioned in exam chair with desired level of recline. Head is tilted away from examiner and the microscope is maneuvered into position for focus & visualization of external auditory canal.
2. Appropriate sized reflective speculum is inserted into the EAC. Diagnostic examination is performed.

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3. Phenol applicator is used to place a drop of phenol in the inferior portion of the TM at the desired site of myringotomy, taking care to avoid contact with any other area. In an anesthetized patient this is not necessary.
4. Myringotomy knife is used to incise the TM.
5. Frasier suction tip is used to remove middle ear fluid.
6. If ventilating tube is warranted, forceps are used to maneuver the tube's more medial phlange into the middle ear. The remainder of the medial phlange is positioned through the myringotomy and into the middle ear.
7. Topical antibiotic (otic preparation) or Afrin (oxymetazoline) drops are applied to the EAC after myringotomy has been preformed.
8. A cotton ball is applied to the lateral EAC.

E. Post-procedure:

No post-procedure monitoring is required.

F. Follow-up treatment:

No routine post-procedure diagnostic testing is required. Patients with ventilating tubes are followed every 6 months unless preprocedure hearing loss warrants more frequent monitoring. Post-procedure audiograms are not required, but often performed to confirm resolution of conductive hearing loss and/or to monitor tube function.

G. Termination of treatment

Removal of the otologic instruments & speculum concludes the procedure.

V. Documentation

A. Documentation is in the electronic medical record

1. Documentation of the pretreatment evaluation and any abnormal physical findings.
2. Record the time out, indication for the procedure, procedure, EBL, the outcome, how the patient tolerated the procedure, medications (drug, dose, route, & time) given, complications, and the plan in the note, as well as any teaching and discharge instructions.

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

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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 indication and contraindications of myringotomy
 - b. Risks and benefits of the procedure
 - c. Related anatomy and physiology
 - d. Steps in performing the procedure
 - e. Documentation of the procedure
 - f. Ability to interpret results and implications in patient management.
3. The Advanced Health Practitioner will observe a clinical expert for three procedures (either outpatient or inpatient and either adult or pediatric), with special attention to technique with orienting instruments and microscope. The AHP will then assist the clinical expert for three procedures in the operative suite on pediatric patients. The AHP must perform this procedure with direct supervision by attending/supervising physician in this setting. Attending physician will provide guidance for **three** procedures to verify clinical competence prior to the AHP performing myringotomy under indirect supervision on adult patients in the outpatient setting.

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 an attending physician. Advanced Health Practitioner must perform this procedure at least **three** times per year. In cases where this minimum is not met, the attending, 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

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

VIII. HISTORY OF PROCEDURE

Revised June 2012 by Subcommittee of the Committee for Interdisciplinary Practice

Reviewed June 2012 by the Committee on Interdisciplinary Practice

Prior revision January 2010

Approved June 2012 by the Executive Medical Board and the Governance Advisory Council.

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