

OTOLARYNGOLOGY – HEAD AND NECK SURGERY

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A) Introduction

Clinical elective students are defined as medical students spending an intensive continuous period in the Department of Otolaryngology–Head and Neck Surgery. An elective block is typically 2 weeks. It is understood that elective students have a particular interest in the specialty beyond the experience obtained during their core medical curriculum.

B) Description

The Otolaryngology program at Western University is based at three teaching hospitals in London, Ontario: London Health Sciences Centre - Victoria Hospital, University Hospital, and St. Joseph’s Health Care. Students are expected to work at all three sites. This is the only major referral centre for Southwestern Ontario, and provides comprehensive tertiary level care in every Otolaryngology subspecialty, including:

- Head and Neck Oncology
- Head and Neck Microvascular Reconstructive Surgery
- Otology and Neuro-otology
- Pediatric Otolaryngology
- Laryngology and Professional voice
- Rhinosinology and Endoscopic skull base surgery
- Facial Plastic & Reconstructive Surgery, Facial Cosmetic Surgery, and Trauma

As well, the teaching hospitals deliver general otolaryngologic care to the city of London and surrounding areas. This unique situation enables students to better appreciate the scope of the specialty.

More detailed information about our department can be found on the internet at:

<http://www.schulich.uwo.ca/otolaryngology/>

Every attempt will be made to allow the student to critically evaluate Otolaryngology–Head and Neck Surgery as a career choice and to objectively view the residency training program at Western University.

As such, the student will be fully integrated into the clinical environment and will have the opportunity to be a vital part of the surgical team. Time will be spent in the operating rooms, providing inpatient care, and participating in outpatient clinics. It will be expected that students participate in the call schedule and have the opportunity to evaluate emergency patients with resident/consultant supervision. Students are also expected to attend weekly Grand Rounds and monthly Journal Club.

Students wishing to participate in clinical projects such as case presentations or retrospective reviews are encouraged to discuss their interest with residents and consultants.

Students will be contacted by email by Ms. Edwards a week before their elective and will be given their schedule, which will be structured as a mentorship style elective. The student will spend the majority of his/her time with two clinical faculty members and their respective teams.

C) **Objectives**

Otolaryngology-Head and Neck Surgery is a surgical subspecialty with tremendous breadth and depth. Problems that affect structures of the head and neck significantly impact patients' function and quality of life (e.g., smell, hearing, breathing, swallowing, phonation). Our patient population ranges from neonates to the elderly. Clinical problems can be life-threatening (e.g., airway obstruction), urgent (e.g., head and neck cancer), and elective (e.g., cosmetic surgery). Our surgical procedures are diverse, ranging from intricate (e.g., paediatric airway surgery), technologically and anatomically complex (e.g., endoscopic sinus surgery with 3D-image guidance), really small (operating on the smallest bones of the body in the ear), really large (head and neck cancer resection with free flap reconstruction), creative (cosmetic surgery), and most of all....rewarding.

1.0 Medical Expert / Decision Maker

A. Skills

- a) Ear
 - i. Otologic history taking for common otologic problems:
 - Ear discharge
 - Otolgia
 - Infant hearing loss
 - Adult hearing loss
 - Dizziness
 - Facial weakness
 - ii. Removal of ear wax
 - iii. Otoscopy including pneumatic otoscopy
 - iv. Tuning fork tests
 - v. Interpretation of basic audiogram (hearing test)
 - vi. Otoneurologic examination
 - Dix-Hallpike maneuver and the Particle Repositioning Maneuver
 - Cranial nerve examination
 - Cerebellar function
- b) Nose and Paranasal Sinus
 - i. History taking for common nasal problems:
 - Nasal obstruction

- Nasal discharge
 - Facial pain
 - Anosmia
 - Epistaxis
 - ii. Anterior rhinoscopy
 - iii. Exposure to endoscopic examination of the full nasal cavity
 - iv. Identification of normal structures within the nasal cavity
 - v. Examination of the external nasal structures
 - vi. General appreciation of plain films and CT scans of the nose and paranasal sinuses
- c) Oral Cavity
- i. History taking for common oral cavity problems:
 - Sore mouth
 - Drooling
 - Salivary gland problems
 - Lip lesion
 - Tongue mass
 - ii. Examination of the oral cavity including bimanual palpitation
 - iii. Identification of salivary duct openings
 - iv. Assessment of the oropharynx
- d) Pharynx and Larynx
- i. History taking for common throat problems:
 - Sore throat
 - Foreign body sensation (globus)
 - Hoarseness
 - Sleep apnea
 - Stridor
 - ii. Examination of the pharynx and larynx via mirror as well as an exposure to endoscopic examination of these anatomical areas
- e) Neck
- i. History taking for common neck/visceral problems:
 - Thyroid nodule
 - Neck mass
 - ii. Examination of the head and neck and its viscera
 - iii. Appreciation of normal anatomy
 - Identification of the triangles in the neck
 - Identification of surface anatomy of normal anatomical structures, such as the carotid artery, thyroid gland, salivary glands, laryngeal structures
 - iv. Observe the technique of fine needle aspiration

B. Knowledge

a) Ear Infection

- i. Demonstrate knowledge of the differential diagnosis of otorrhea and otalgia (local and referred) with an emphasis on external otitis, acute and chronic otitis media and their complications

b) Hearing Loss / Tinnitus

- i. Show an understanding of the need for the early diagnosis of hearing loss in infants including the need for a high “index of suspicion” (early warning signs) and the need for

- early audiologic testing and habilitation. The protocol followed by the *Universal Infant Hearing Program* should be known to you.
- ii. Describe the common causes of conductive hearing loss (external canal to the staples footplate)
 - iii. Develop a differential diagnosis of sensory neural hearing loss (sudden vs gradual), appreciate the need for preventative measures in the workplace (noise reduction) and the devices available for rehabilitation (hearing aids and assistive devices)
 - iv. Provide a working knowledge of tinnitus (subjective and objective)
- c) Vertigo
- i. Differentiate vestibular vertigo from other causes of imbalance vertigo
 - ii. Distinguish peripheral vs central vertigo
 - iii. Provide a DDX of vertigo with and without hearing loss
 - iv. Diagnose benign paroxysmal vertigo based on the history and clinical findings
- d) Facial Paralysis
- i. Differentiate peripheral vs central paralysis and show an understanding of peripheral facial paralysis from an Otolaryngology-Head and Neck Surgery perspective (i.e., intracranial, temporal bone, extratemporal)
- e) Nose and Paranasal Sinuses
- i. Describe the functions of the nose (airway, mucociliary system, warming and humidification)
 - ii. Demonstrate knowledge of the DDX of nasal obstruction with and without rhinitis
 - iii. Recognize, investigate, and treat acute sinusitis
 - iv. Formulate an approach to a patient with acute epistaxis (anterior and posterior)
- f) Pharynx
- i. Demonstrate an understanding of obstructive sleep apnea. Who is at risk? What are the symptoms and long term complications?
 - ii. Describe the mechanisms that are in place that allow one to maintain and protect the lower respiratory tract (i.e., DDX of aspiration)
 - iii. Describe the signs and symptoms that might arise due to the presence of an infection/mass lesion (structural abnormality or loss of function, e.g., carcinoma of the tongue base) in this area (i.e., the effect on swallowing, breathing, phonation, pain, foreign body sensation,odynophagia, referred otalgia)
- g) Larynx and Upper Airway
- i. Describe the supraglottic region and understand that it extends up into the pharyngeal airway and thus pathology in this region presents in a way similar to other pharyngeal airway pathologies
 - ii. Formulate a DDX for dysphonia (hoarseness)
 - iii. Demonstrate knowledge of the different types of stridor that present from the different sites of the upper airway
 - iv. Describe the acute management of upper airway obstruction using positioning, artificial airways, and tracheotomy
- h) Oral Cavity and Pharynx
- i. Outline the three phases of swallowing with emphasis on the oro-pharyngeal phases for Otolaryngology-Head and Neck Surgery purposes
 - ii. Demonstrate a basic knowledge of dental abnormalities as they might be included as the primary cause of oral symptoms and signs
 - iii. Have knowledge of the DDX of mucosal lesions in the oral cavity
 - iv. Demonstrate knowledge of the differential diagnosis of dysphagia
 - v. Show an understanding of the lymphatic drainage of the oropharynx as a route of metastatic spread

- i) Salivary Glands
 - i. Demonstrate knowledge of the anatomy of the three major salivary glands
 - ii. Discuss the DDx of salivary gland swelling (single gland, multiple glands)
- j) Congenital Masses
 - i. The DDx of congenital lesions found in the neck (midline and lateral), and have knowledge of the pertinent embryology
- k) Lymphatics
 - i. The anatomy (nomenclature) of the regional lymph nodes
 - ii. The importance of the regional lymphatic drainage and its relevance in the DDx of primary lymph node pathology
 - iii. Other pathologic entities that might occupy a lymph node
 - iv. The importance of a thorough head and neck functional inquiry in investigating a possible metastatic neck mass from a primary in the upper aerodigestive tract (the functional inquiry often leads to the primary site of pathology)
 - v. Risk factors in developing H&N cancer malignancies
 - vi. General principles in the treatment of H&N squamous cell malignancies and the multidisciplinary nature of H&N cancer treatment
 - vii. Quality of life issues inherent in choosing or not choosing different treatment modalities
- l) Thyroid Viscera
 - i. The anatomy of the thyroid gland
 - ii. DDx of a thyroid mass (functional vs neoplastic) for Otolaryngology-Head and Neck Surgery emphasis on neoplastic thyroid abnormalities

D) **Evaluation**

During the student's elective period, the consultants and residents with whom the student has spent time will complete evaluations. All evaluations are reviewed and compiled by the Undergraduate Director and a report is made available to the student at the end of the rotation on One45.

An outgoing interview will take place with the Otolaryngology-Head and Neck Surgery On-site Chief of the hospital in which the student spends the last week of elective in order to answer further questions the student may have, and to provide the student with an overall assessment from the department.

E) **Type of Clinical Experience**

In patient ()
 Out Patient ()
 Both (x)

F) **Night and Weekend Call**

Yes (x)

G) **Evaluation Procedure**

Written Exam ()
 Oral Exam ()
 Informal Clin. Eval. (x)

H) **Number of Students Accepted**

Each block: 4