Goals and Objectives for the Otolaryngology-Head & Neck Surgery Rotation
Resident PGY3
Hamilton Health Sciences (1 block of 4-5 months)
Revised February 23, 2011

Overview

During the third year of their residency training the resident will spend 1 block of four or five months at Hamilton Health Sciences. The resident will gain experience in dealing with outpatients in the clinic and with inpatients on the wards, the intensive care units, the operating room and in the emergency department. The Otolaryngology service at McMaster Hospital involves a significant amount of pediatric practice, in addition to adult practice and the Hamilton General and Juravinski Hospitals involve an adult practice only. All residents must review their learning objectives with the Otolaryngology staff at the beginning and at the end of the rotation to facilitate meeting the objectives.

Otolaryngology Staff Surgeons: Drs B. Korman, R. Lemckert, J. MacLean, D. Reid and D Sommer.

Schedule of the week: Varies weekly; need to verify – posted at McMaster and HGH clinic sites at least one month in advance.

You will be expected to make rounds with your team in the mornings before starting in the operating room or other activities of the service and at the end of the day. You are expected to make handover to the resident on call. The Chief resident will assign the schedule of the week for the team. If the Chief resident is absent, he/she will delegate the resident with most seniority to that role temporarily.

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Call:

You will be assigned to be on call with the otolaryngology service. The Chief resident will make up your call schedule. Please note that call during weekdays is from 08:00 to 08:00 hrs and weekend call is from Friday 17:00 to Monday 08:00 hrs unless notified differently. Call will be set according to PAIRO guidelines.
Overall Objectives:

*It is recognized that the resident may not be exposed to all elements of these objectives; however at the conclusion of the rotation the resident should demonstrate knowledge or competency in the following:*

The resident is expected to gain understanding and knowledge of more advanced General Otolaryngology, Pediatric Otolaryngology, will be introduced to Otology surgery, Rhinology and Laryngology. Upon completion of the PGY 3 year, the resident will have attained adequate skills and knowledge to diagnose and manage common and some advanced otolaryngology pathology.

Specific Objectives:

**Medical Expert**

The resident is expected to learn how to:

Continue improvement in skills in clinical history taking and examination of the otolaryngology patient using basic office instrumentations and office (flexible and rigid) endoscopic and microscopic equipment.

Continue improvement in knowledge in the indications for and interpretation of diagnostic imaging techniques of the head and neck.

A thorough knowledge of advanced audiology testing and treatment strategies.

Synthesize all the information and formulate a diagnostic work-up and treatment plan for common and some advanced otolaryngology problems.

Carry out pre and post-op care on the ward and the clinic.
Obtain efficient follow-up skills related to disease monitoring, compliance with treatment.
Recognize common complications of treatment and their management.

**Knowledge Basic sciences and anatomy:**

Understand better the basic anatomy and physiology of the ear, nose, paranasal sinuses, upper aero digestive tract, thyroid/parathyroid glands, neck.
Knowledge clinical:

1. Principles of evaluation and management of patients in Pediatric Otolaryngology:

- Acute airway obstructions in NICU, PICU, ER.
- Stridor in neonates and infants.
- Foreign body upper aero digestive tract.
- Caustic ingestion/burns.
- Common congenital anomalies: craniofacial, choanal atresia, branchial cleft, thyroglossal cyst, TEF etc.
- Congenital hearing loss.
- Congenital anomalies of the external, middle, inner ear.
- Hearing loss all etiologies and common syndromes.
- Cochlear implants selection and indication.
- Indication and interpretation of conventional audiometry, impedance audiometry, auditory brainstem response, otoacoustic emissions.
- Otitis media: acute, serous, chronic and related complications.
- Cholesteatoma congenital and acquired awareness.
- Head and neck neoplasms benign and malignant.
- Congenital nasal anomalies: stenosis/atresia nostril, choanal atresia, dermoid cyst, glioma, meningoencephalocele …
- Acute sinusitis with complications.

2. Principles of evaluation and management in General Otolaryngology including:

- Acute upper airway obstructions.
- Head and neck trauma (blunt, penetration) awareness.
- Severe epistaxis.

- Upper aero digestive diseases: (see also Rhinology and Laryngology).

  Inflammatory and infectious: laryngitis, epiglottitis, tracheitis, laryngotracheobronchitis, angioedema, obstructive sleep apnea, pharyngotonsillitis, aphthes, angina, glossitis, stomatitis, herpetic oropharynx lesions, oral-pharynx-esophageal candidiasis, burning mouth syndrome, Ludwig angina, sclerodermia of esophagus …

  Dysfunctions: laryngeal spasms, neurological affections of larynx and esophagus, esophageal spasms, Zenker diverticulum, laryngopharyngeal reflux, cricopharyngeal muscle hypertrophy/dysfunction, achalasia…

  Trauma: blunt and penetration to pharynx, larynx, esophagus (awareness), burns caustic and inhalation, foreign body…
Salivary glands diseases: related symptoms.

Congenital: cyst/fistula of first branchial arch, hemangioma and lymphangioma.

Inflammatory and infectious: bacterial and viral infections, acute/chronic/recurrent sialadenitis, sialolithiasis, canal strictures, granulomateous diseases, and immunology diseases.

Trauma to the gland, canal and facial nerve.

Dysfunction: hyper/hypo sialorrhea, etiology of atrophy/hypertrophy of glands, effects of metabolic and endocrine diseases, medication side effects, radiation therapy side effects, Frey syndrome…

Principles of surgery of salivary glands dissection planes, finding the facial main trunk and branches, lingual and hypoglossal nerves, abscess incision and drainage.

Radiology characteristics related to certain salivary gland pathology such as lithiasis, sialadenitis, Sjogren, canal stricture and blockage, tumor location/malignancy signs.

3. Principles of evaluation and management of patients in Otology:

- Temporal bone trauma/fracture awareness.
- Other ear trauma: perforation TM, barotraumas.
- External otitis: bacterial, fungal, and malignant.
- Otitis media: acute, serous, and chronic.
- Hearing loss classifications.
- Mastoiditis: acute and chronic awareness.
- Cholesteatoma awareness.
- Menieres disease and hydrops awareness.
- BPPV.
- Indications, technical aspects and interpretations of conventional audiometry, impedance audiometry, electrocochleogram awareness, auditory brainstem response, otoacoustic emissions.
- Rehabilitation for hearing loss: hearing aids, implants and other hearing devices awareness.

4. Principles of evaluation and management of patients in Rhinology:

- Congenital anomalies: stenosis/atresia nostril, choanal atresia, dermoid cyst, glioma, meningoencephalocele …
- Inflammation of external nose: nasal eczema, folliculitis of vestibule, furuncle,
erysipelas, impetigo, rhinophyma/rosacea, trichophyton, lupus erythematosus.
- Nasal obstruction differential diagnosis.
- Anosmia/hyposmia.
- Rhinitis all types (allergic, vasomotor, sicca, infectious, atrophic (ozena), hypertrophic, medicamentosa).
- Allergy and immunology: immune system (atopy, structure and function of immunoglobulins and the Human Leukocyte Antigen (HLA) system, air borne allergens mechanisms, role of cellular elements in allergy, classification /seasonal variation/geographic variations of allergens, investigations and treatments of allergic rhinitis, anaphylactic reactions.
- Nasal/sinus polyps’ differential diagnosis (inflammatory, cystic fibrosis, inverted papilloma, Samter’s triad, Churg-Stauss syndrome…).
- Sinusitis: acute, chronic, viral, bacterial, fungal local and invasive.
- Nasal sinus benign neoplasms.
- Granulomatosis diseases affecting the nasal cavity: TB, Wegeners, lethal midline granuloma, sarcoidosis, rhinoscleroma, leprosy, syphilis …
- Nasal saddling.
- CSF leak.
- Trauma: nasal bone, nasoethmoid complex, frontal sinus fractures.

5. Principles of evaluation and management of patients in Laryngology:

- Complete voice assessment.
- Professional voice.
- Indication and interpretation of voice videostroboscopy.
- Benign vocal cords lesions (nodules, polyps, granuloma, inclusion cyst, papilloma, Reinke, etc.) .
- Muscle tension dysphonia.
- Neurological diseases affecting voice (stroke, Parkinson, etc.).
- Systemic diseases affecting voice (Wegeners, rhumatoid arthritis, sarcoidosis etc.).
- Laryngitis acute and chronic.
- Laryngopharyngeal reflux.
- Vocal paralysis.

Technical and Operative skills:

1. Advanced Pediatric:

- Myringotomy and tubes placement improve skill and rapidity of execution.
- Adenotonsillectomy improve skill and rapidity of execution.
- Perform flexible nasopharyngolaryngoscopy in neonates, infants and children.
- Perform rigid esophagoscopy diagnostic, with removal of foreign body with assistance.
- Direct laryngoscopy diagnostic, removal foreign body with assistance.
- Introduction to tympanoplasty with supervision.
- Thyroglossal cyst removal (sistrunk) with assistance.
- Branchial cleft cyst removal with assistance.
- Drainage retropharyngeal abscess.

2. General Otolaryngology:

- Tracheostomy: percutaneous/opened with limited assistance.
- OSAS: tonsillectomy, uvulopalatopharyngoplasty with assistance.
- Biopsy/FNA neck lymphatic node.
- Excision of ranula with assistance.
- Branchial cleft cyst removal with assistance.
- Neck wound closure.

3. Otology:

- Myringotomy and tubes placement in office/OR.
- Myringoplasty paper patch in office/OR.
- Perform particle-repositioning maneuver.
- Tympanoplasty elevation of tympanic flap with supervision.
- Harvesting graft temporalis fascia, perichondrium, cartilage with assistance.
- Tympanoplasty placement of graft with supervision.
- Introduction to cortical mastoidectomy with supervision.

4. Rhinology:

- Rigid, flexible nasal sinus endoscopy.
- Biopsy nasal cavity.
- Septoplasty with assistance.
- Inferior turbinates reduction, cauterization.
- Endoscopic sinus surgery nasal polypectomy, uncinctomy, anterior ethmoidectomy, maxillary sinusotomy with supervision.
- Endoscopic sinus surgery frontal recess, sphenoidotomy observation.
- Endoscopic sinus surgery repair of CSF leak observation.
- Drainage of subperiostal orbital abscess external/ endoscopic approach observation.
- External approach to sinuses: ethmoidectomy, frontal trephination, frontal sinus osteoplasty observation.
- Endoscopic treatment of benign sino-nasal tumors such as inverted papilloma observation.
- Endoscopic or external medial wall maxillectomy observation.
- Setting up the image system guidance.
- Frontal sinus fracture repair observation.
- Epistaxis: endoscopic sphenopalatine artery ligation observation.
- Epistaxis: anterior ethmoid artery, internal maxillary artery ligation observation.
5. Laryngology:

- Perform direct laryngoscopy/stroboscopy in voice clinic.
- Microlaryngoscopy biopsy/excision lesions with supervision.
- Microlaryngoscopy excision lesion with CO2 laser/debrider with supervision.

**Communicator**

Take a relevant detailed history from the patient, the family and/or paramedics. Discuss with the patient and/or family the diagnosis, investigations, treatment and potential complications/morbidities. Discuss and deal with patient’s concerns and complaints appropriately. Deal with unfavorable outcome or unrealistic expectations. Obtain an informed consent for treatment from the patient and/or family. Communicate effectively with health care professionals and other members of the team. Dictate/write consultations, OR reports, progress notes and discharge summaries clearly. Listen effectively. Participate and present at grand rounds.

**Collaborator**

Consult and interact with respect to other health care professionals, in particular with the anesthesiologist, nurses in the OR, clinics and wards, respiratory technicians, audiologists, speech language pathologists and clerks in the outpatient clinics. Consult and work effectively with the attending staff. Consults and works effectively with other medical specialists. Consults and works effectively with colleagues, medical clerks and students.

**Manager**

Manage effectively the different tasks involved in the diagnosis and treatment of outpatients and inpatients. Prioritize responsibilities. Utilize health care resources safely and effectively. Utilize information technology effectively. Work well in the health care organization (clinic, ward, ICU, ER and operating room). Keep a log of your surgical procedures.
Health Advocate

Awareness of the health and preventive measures related to foreign body ingestion in children, noise exposure, tobacco smoking and alcohol consumption as a health risk in head and neck cancer.
Attention to issues related to public safety/policies.
Advocate on behalf of patients.

Scholar

Prepare and read around surgical cases and learn the steps of the proposed treatment.
Read about clinical cases and participate appropriately by asking questions.
Teach medical students, junior and other health care professionals.
Participate in academic rounds, journal clubs, teachings sessions and other educational outlets.
Evaluate proposed diagnosis and treatment with current literature when appropriate.
Be alert for opportunities to contribute in the report of cases of mutual interest to audiologists, speech language pathologists, pediatricians, intensive care physicians, neurosurgeons, plastic surgeons and fellow colleagues.
Obtain a satisfactory performance at the residency program oral/written examinations.
Obtain a satisfactory performance at the Canadian in training exam that shows a positive progression compared to the previous year.

Professional

Deliver health care to patients in an honest, ethical and professional manner.
Recognize own limitations and seek advice and help when needed.
Accept constructive feedback and act appropriately.
You will have the opportunity to explore ethical issues such as informed consent and potential complications of treatments, among many others.
Continue to pursue a balanced life-style.

Bibliography suggestions

Bluestone/Stool: Pediatric Otolaryngology
Byron J Bailey: Head & Neck Surgery-Otolaryngology
Cummings: Otolaryngology-Head and Neck Surgery

Radiology

Hermans R: Head and Neck Cancer Imaging on line
Harnsberger: Handbook of Head and Neck Imaging
Surgical skills references

Byron J Bailey: *Atlas of Head & Neck Surgery-Otolaryngology*
Montgomery W Wayne: *Surgery of the upper respiratory system vol.2*
Lore: *An Atlas of Head and Neck Surgery*
Peter John Wormwald: *Endoscopic Sinus Surgery*
House Ear Institute: *Temporal Bone Surgical Dissection Manual*