McMaster University SURGERY

McMaster Otolaryngology-Head and Neck surgery
Goals and Objectives
Anatomical Pathology and Radiology Rotation
CanMEDS 2015

Normal Cohort-Fifth Year Resident

Overview

During the fifth year of residency training the resident will spend one block in Anatomical Pathology (1 week) and Radiology (3 weeks) at St. Joseph Healthcare in Hamilton. Residents will also spend a few days at the McMaster University Medical Centre in Pediatric Anatomical pathology if applicable. The Otolaryngology –Head and Neck Surgery service at St Joseph's Hospital involves a significant amount of head and neck oncology as well as good radiology cases. All residents must review their learning objectives with the pathologists and radiologists at the beginning and at the end of the rotation to facilitate meeting the objectives.

Staff Otolaryngology- Head and Neck pathologist: variable, resident will need to contact the program

Staff Otolaryngology-Head and Neck radiologist:
Dr. Judith Coret-Simon
Dr. Ryan Rebelo

Schedule of the week: Varies weekly and needs to be confirmed with the supervisor or delegate responsible of the schedule. Resident must contact the staff pathologist and radiologist to plan their schedule in advance.

Call:
You will not be assigned to be on call during this rotation.

Overall Objectives

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

The resident is expected to acquire sufficient expertise to enable diagnosing normal and most common pathology specimens of the Otolaryngology Head and Neck Surgical specialty. The resident will be exposed to the principals of the pathology laboratory

techniques and colorations of specimens and will have an in-depth exposure to head and neck oncology and endocrine pathology.

The resident is expected to also acquire sufficient knowledge surrounding ordering, reading and interpreting key imaging pertinent to the practice of Otolaryngology-Head and Neck surgery.

The Assessment of the resident on this rotation will be completed by using the in training evaluations report (ITER) for each specialty on MedSIS. The bolded intrinsic CanMEDS roles will be part of the assessment on the ITER.

Specific Objectives:

Medical Expert

Pathology:

(1.3) Apply knowledge of the biomedical sciences relevant to pathology

- Understand well/in depth the normal gross and light microscopic appearance of tissue from the ear, nose, paranasal sinuses, upper aerodigestive tract, thyroid/parathyroid glands, salivary glands, lymphatic tissues and neck

- **Differentiate benign cells from malignant cells in tissue specimens**

- **Become familiar with the following pathology:**

  External Ear: **chondrodermatitis nodularis chronica helices, keloids, malignant external otitis**, accessory tragus, choristoma and hamartoma, inflammatory polyps, cysts of the external ear, papilloma, osteomas and exostosis, **adenomatous neoplasms of ceruminal gland, ceruminal gland neoplasms, basal cell carcinoma, squamous cell carcinoma, malignant melanoma**

  Middle and inner ear: **inflammatory polyps, cholesteatoma, teratomas**, hamartomas, choristomas, **cholesterol granuloma, jugulotympanic paraganglioma, adenoma, adenocarcinoma of the middle ear, squamous cell carcinoma of the middle ear, melanoma, meningioma of the temporal bone, acoustic neuroma, metastatic neoplasia of the temporal bone, eosinophilic granuloma (histiocytosis X) of the temporal bone**

  Nose and paranasal sinuses: **inflammatory polyps, papilloma (inverted, , cylindrical, transitional) mucocele, squamous cell carcinoma, adenocarcinoma neuroesthesioblastoma, vascular neoplasms**, cartilaginous neoplasms, muscle neoplasms, mesenchymal neoplasms, osseous neoplasms, **hemangiopericytoma**

  Skull base: **Sellar neoplasms: pituitary adenoma. Clival neoplasms: chordoma, chondroma, other**
  Other neoplasms: Meningioma, esthesioneuroblastoma

Areodigestive tract: **cysts, papilloma, granulomas, amyloidosis, teratomas, hamartomas, necrotizing sialometaplasia, laryngocele, squamous cell carcinoma, verrucous squamous cell carcinoma, spindle cell carcinoma, adenocarcinoma, vascular neoplasms, cartilaginous neoplasms, muscle neoplasms, mesenchymal neoplasms, osseous neoplasms**

Lymphatic system: **inflammatory, metastatic carcinoma, Hodgkin and non-Hodgkin lymphoma**

Skin: **Benign lesions: vascular, skin tag, keratoacanthoma, pyogenic granuloma, keloid, nevus, keratosis, neurofibroma. Malignant lesions: basocell carcinoma, squamous cell carcinoma, spindle cell carcinoma, melanoma**

Salivary glands: **sialadenitis, sialosis, Sjogren's, pleomorphic adenoma, monomorphic adenoma, mucoepidermoid tumor, acinic cell tumor, carcinomas such as adenoid cystic carcinoma, adenocarcinoma, epidermoid carcinoma, undifferentiated carcinoma, carcinoma in pleomorphic adenoma, metastatic neoplasms in the salivary glands, benign and malignant lymphoepithelial lesions**

Endocrine:
Thyroid gland: **Benign: (thyroiditis, multinodular goiter, benign nodule, adenoma, cyst, teratoma), Malignant: (primary follicle-cell derived: PTC and variants, Follicular carcinoma, poorly-differentiated carcinoma, anaplastic; Primary neurocrest-derived: medullary carcinoma familial variants and sporadic; primary, Other including lymphoma, sarcoma, squamous cell carcinoma, metastatic carcinoma.**
Parathyroid gland: **adenoma, hyperplasia,carcinoma**

Odontogenic neoplasms: **ameloblastoma**, melanotic neuroectotermal tumor of infancy, osteomas, osteoblastoma, fibrous dysplasia, giant cell neoplasms, ossifying fibroma, odontoma, adenomatoid odontogenic tumor, ameloblastic fibroma, myxoma, cementoma,
cysts (radicular, dentigerous (follicular), keratocyst, eruption, primordial cyst, calcifying odontogenic cyst), osteogenic sarcoma, chondrosarcoma, Ewing's sarcoma, metastatic carcinoma.

(2.2) **Understand the principles of tissue processing and the use of different fixatives in the laboratory**
(2.2) **Understand the use and indications for special staining**
(2.2) **Understand the indications and techniques of immunohistochemistry and molecular markers**
(2.2) **Understand the general indications and role of electronic microscopy**
(2.2) **Examine gross and microscopic tissue specimens of frozen and permanent sections; examine cytology slides and recognize features of some common conditions, and the advantages and challenges of this modality**

Radiology:

(1.3) Apply knowledge of the biomedical sciences relevant to radiology

- **Know the normal radiological anatomy in depth for the ear, nose, paranasal sinuses, upper aerodigestive tract, thyroid and parathyroid glands, salivary glands, lymphatic tissues, skin, odontogenic tissues and the neck**

- **Recognize the normal and its variants on imaging test for the major and neck sites: and able to describe the location and extent of common otolaryngology-head and neck diseases on imaging tests**

- **Become familiar with pathologic radiological findings for the following:**
  Otology -Disease of the external, middle ear, inner ear, cerebellopontine angle and petrous apex
  Otology - Congenital disorders
  Rhinology/Rhinosinusitis (benign and malignant, including anatomic variations and post-operative scans)
  Major and minor salivary gland disease (benign and malignant)
  Head and neck cutaneous malignant
  Head and neck nasopharynx/oropharynx/hypopharynx (benign and malignant)
  Head and neck larynx/recurrent laryngeal nerve/trachea (benign and malignant)
  Head and neck thyroid gland (benign and malignant)
  Head and neck masses, lymphatic (benign and malignant)
  Trauma and fractures of skull and temporal bone, facial bone and mandible, larynx

(2.2) **Understand the indications and preferable imaging for the investigations of Otolaryngology-head and neck disorders**

(3.2) Recognize and explain risks and benefits of different imaging modalities

Communicator

Pathology:

(2.1) **Learn how to present and describe the findings of the gross and microscopic specimens in an organized fashion**

(5.1) Learn the importance of providing relevant information about the patient's history/physical examination/laboratory results when sending a specimen for analysis to a pathologist

(5.3) **Understand how the pathologist reports the results on the consultation form**

Radiology:

(2.1) **Develop proficiency in reading imaging and describing findings using appropriate radiological terminology**

(5.1) Express findings in a clear and concise manner

(5.1) Learn about the correlation of the clinical and radiological findings

(5.3) Understand how the radiologist reports the results

Collaborator

Pathology:

(1.1) **Establish and maintain positive relationships with physicians and other health care professionals, in particular with the pathologists and their team, residents, laboratory technicians and clerical staff**

(1.3) Communicate efficiently with the pathologists, the laboratory technicians and associated physicians

(2.2) Understand the team member's role and participate in the pathology team

Radiology:

(1.1) **Establish and maintain positive relationships with physicians and other health care professionals, in particular with the radiologists and their team**

Leader

Pathology:

(2.1) Use resources effectively to balance patient care, learning needs, and outside activities

(2.1) Understand how to allocate finite health care resources wisely and effectively

(4.1) **Allocate time efficiently during self-learning in the laboratory**

Radiology:

(2.2) **Recognize the importance of adequate imaging choice in the context of limited health resources**

Health Advocate

Pathology:

(1.1) Recognize the health risks involved in various clinical diseases

Radiology:

(1.1) **Learn how to explain risks and benefits of different imaging modalities to patients**

Scholar

Pathology:

(1.1) Read about the pathology of common diseases of Otolaryngology-Head and Neck surgery

(1.2) **Identify opportunities for learning around the cases seen during the rotation, look up textbooks and literatures**

(1.3) Participate in academic rounds and other educational outlets of the department of pathology

Radiology:

(1.1) **Continue self-education pertaining to current radiological technologies and their impact on current and future practice of Otolaryngology-Head and Neck surgery**

(1.2) **Identify opportunities for learning and improvement by reading around the cases seen during the rotation**

(1.3) Participate in academic rounds and other educational outlets of the department of pathology

Professional

(1.1) Deliver highest quality care with integrity, honesty and compassion
(1.1) **Exhibit appropriate personal and interpersonal professional behaviours**
(3.1) Practise medicine ethically consistent with obligations of a physician

Bibliography suggestions

Pathology:
Halifax course review documents
Batsakis John: *Tumors of the Head and Neck*
Wenig Bruce: *Atlas of the Head and Neck Pathology* 2008 on line
Shah Jatin: *Cancer of the Head and Neck* 2001 on line
Armed Forces Institute of Pathology, Thackray and Lucas: *Tumors of the Major Salivary Glands*
Armed Forces Institute of Pathology, Hyams and al: *Tumors of the Upper Respiratory Tract and Ear*

Radiology:
Hermans R: *Head and Neck Cancer Imaging* on line
Harnsberger: *Handbook of Head and Neck Imaging*

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