

POST-DOCTORAL FELLOWSHIP IN RHINOLOGY

DURATION OF THE COURSE : One year

Aim of the Course -

To provide a broad experience in surgical and evaluative Rhinology.

Goal 1

To develop proficiency in performing A comprehensive EVALUATION, including office-based NASAL endoscopy, of the PATIENT who presents with rhinologic COMPLAINTS.

In the outpatient setting, the fellow will first observe consultants perform initial and follow-up evaluations. Subsequently, the fellow will perform progressively greater parts of these evaluations. Emphasis will be placed upon office-based nasal endoscopy, including correlation of endoscopic findings with patient symptoms, past surgical history and CT scan images. Strategies for gathering an appropriate clinical history from complex patients who have undergone multiple procedures and treatments will be developed.

Goal 2

To develop ABILITY to DIAGNOSE AND MANAGE PATIENTS with HARD-TO-TREAT, REFRACTORY DISEASES of the PARANASAL sinuses.

The fellow will demonstrate proficiency in synthesizing history and physical examination, nasal endoscopy, CT scans, MR scans, and other laboratory data to create a clinical impression and diagnosis list, which together shall support a comprehensive, multi-modality treatment strategy. The fellow will attend to all Rhinology ward consultations from other departments.

Goal 3

To recognize AND MANAGE COMPLICATIONS of INFLAMMATORY DISEASES of the PARANASAL sinuses AS well AS COMPLICATIONS of PARANASAL sinus surgery.

The fellow will gain experience in evaluating and treating patients who suffer complications due to inflammatory diseases of the paranasal sinuses as well as patients who suffer surgical complications.

Goal 4

To GAIN knowledge ABOUT the INDICATIONS AND CONTRA-INDICATIONS for VARIOUS SURGICAL procedures AS well AS the specific techniques themselves.

The fellow will develop proficiency in all the standard endoscopic and open rhinological procedures. Subsequently, the fellow will be made familiar with advanced rhinological procedures. During the course, he/she will understand the risks and benefits of each advanced rhinologic procedure as well as alternative treatments. Emphasis will be placed upon minimally invasive, endoscopic approaches. The nuances of safe revision sinus surgery will be emphasized.

Goal 5

To ASSIST the performance of ADVANCED SURGICAL techniques for the MANAGEMENT/TREATMENT of PARANASAL SINUS AND SKULL BASES disorders/DISEASES.

By observing, assisting, and reading about such procedures, the fellow will gain knowledge about the most advanced, endoscopic approaches for a wide range of paranasal sinuses and skull base disorders/diseases (including chronic rhino sinusitis, recurrent sinonasal polyposis, CSF leak, and anterior cranial base neoplasms). Additionally, the fellow will develop skills for endoscopic approaches to the orbit, including optic nerve and orbital decompression, dacryocystorhinostomy and also sphenopalatine and internal maxillary artery cauterizations/ligations for epistaxis.

Goal 6

To ACQUIRE core knowledge in rhinologic DISEASES including ANATOMY, HISTOPATHOLOGY, microbiology AND RADIOLOGY of common AND RARE RHINOLOGICAL DISEASES

The fellow will be encouraged to perform cadaveric dissections in the Anatomy department. The fellow will become familiar with diagnosis and interpretation of common radiological investigations like plain and contrast enhanced CT and MRI scans as well as advanced radiology like angiography, embolisation and PET scanning of lesions of the nose and paranasal sinus. The fellow will coordinate Pathology and Microbiology conferences where cases seen in the department are discussed on a regular basis.

Goal 7

To UNDERSTAND the role of Ig-E MEDIATED PATHOPHYSIOLOGY (i.e., ALLERGY) in rhinologic DISEASES.

The fellow will participate in the evaluation and care of patients with sinonasal allergy. The fellow will observe tests like skin allergen testing and olfaction testing in the Rhinology lab.

Goal 8

To LEARN STRATEGIES for the multi-disciplinary EVALUATION of rhinologic DISEASES

The fellow will help coordinate multi-disciplinary evaluations, including consultations with Neurosurgery, Neurology, Ophthalmology, Radiology, Radiotherapy, Pulmonary Medicine and Plastic Surgery as appropriate. The fellow will attend Tumour Board meetings where decisions on management of patients with sinonasal tumours will be made.

Goal 9

To UNDERTAKE TEACHING sessions for POSTGRADUATES AND UNDERGRADUATES

The fellow will participate in all teaching programmes, particularly those involving undergraduates and postgraduates. The fellow will be involved with assisting in conducting CME programmes.

Goal 10

To present AT LEAST one ABSTRACT AT A conference AND write AT LEAST one MANUSCRIPT THAT is submitted to A MAJOR JOURNAL for publication.

The fellow will be given ample guidance and opportunity to perform one or more institutional review board funded and approved clinical research projects and write them up for publication.

Knowledge and skills to be acquired by the students on completion of the course

Clinical and operative skills ,Research and Teaching

A. CLINICAL AND OPERATIVE SKILLS

See and evaluate rhinology patients in the Rhinology clinics.

Supervise the preparation process for patients requiring rhinologic surgery.

Participate in rhinology cases in the operating room.

Round on in-hospital rhinology patients twice daily.

Participate in the care of emergency rhinology patients.

Fellow will perform and assist a broad range of rhinology surgeries including:

1. Endoscopic septoplasty

2. Primary and revision functional endoscopic sinus surgery (FESS)
3. Frontal sinus surgery
4. Orbital and optic nerve decompressions
5. Endoscopic dacryocystorhinostomy
6. Endoscopic closure of CSF leaks
7. Septorhinoplasty
8. Turbinoplasty and turbinate diathermy
9. Sphenopalatine & internal maxillary artery cauterizations/ligations for the control of epistaxis.
10. Endoscopic juvenile nasopharyngeal angiofibroma resection.
11. Choanal atresia correction.
12. Oroantral fistula closure.
13. Partial and total maxillectomy.
14. Orbital exenteration.
15. Lateral rhinotomy.
16. Midfacial degloving.
17. Le Fort I osteotomy.
18. Transpalatal approaches.
19. Frontal sinus trephination.
20. Caldwell-Luc surgery

RESEARCH SKILLS

The trainee would be expected to

1. Actively be involved in on-going research activities
2. Complete a prospective research project during the 2 year training period
3. Publish the work in a peer-reviewed journal.
4. Present a paper presentation in a conference.
5. Utilise departmental and institutional library facilities.

Through participation in an existing Research Methodology course, the candidate is expected to gain insight into the methodology of clinical research including the design and

planning of studies, analysis of data, simple statistical methods and finally the nuances of logical presentation of the data in a scientific communication.

TEACHING SKILLS :

The trainee would be expected to gain teaching experience through taking regular classes for undergraduates and postgraduates and nursing and AHS students.

Rhinology fellow is also expected to:

Provide mentorship to residents training in primary FESS and general otolaryngology cases

Actively participate in the department's academic sessions, grand rounds and journal clubs

DETAILED SYLLABUS

Basic Sciences

Nose and Paranasal Sinuses

Anatomy and Embryology.

Physiology including physiology of Smell

Pathophysiology of the nasal sinuses in flight and diving.

Nasal Septum.

Evaluation of the nasal airway (Rhinomanometry)

Skull base

Surgical anatomy

Clinical neuroanatomy Imaging and Radiology *IMAGE TAKING AND INTERPRETATION of*

X-rays

CT

MRI

Contrast studies with respect to ENT

Angiography

Basic immunology

Microbiology as related to ENT

Staphylo, Strepto, Pneumo etc

Fungus: Aspergillus , Rhizopus, Mucor, Rhinosporidiosis etc.

Wound healing principle

Intensive care in ENT patients

Anesthesia in ENT

Biomaterials used in ENT

Medical negligence in otolaryngology

Principle of chemotherapy

Principle of radiotherapy

Principle and use of nuclear medicine

Principles of laser surgery

PHARMACOLOGY AS RELATED to ENT

Pharmacology of sympathomimetic drugs and their uses

Local anesthetics and analgesics

Chemotherapy of malignant conditions

Corticosteroids and its usage in rhinology

Antihistamines

Antibiotics – recent trends

Antifungals

Disorders: Their Medical/Surgical Management

Nose and paranasal sinuses

Congenital anomalies in nose

Craniofacial anomalies

Conditions of external nose

Deviated septum and septoplasty

Abnormalities of smell

Mechanism and treatment of allergic rhinitis

Food allergy and rhinitis

Infective rhinitis and sinusitis

Complications of sinusitis

Intrinsic rhinitis

Nasal polyps

CSF rhinorrhoea

Fracture of facial skeleton

Rhinoplasty

Epistaxis

Snoring and sleep apnea

Non healing granulomas of nose

Facial pain and headache

Aspects of dental surgery for ENT

Trans sphenoidal hypophysectomy

The orbit with relation with nose

Cysts, granulomas and tumours of jaws, nose and sinuses

Fungal sinusitis

Neoplasm of nasal cavity

Neoplasm of PNS

Foreign body in nose

Dental development ,orthodontics, cleft lip and palate

Pediatrics anesthesia

Practical

History taking pertaining to rhinology and examination like:

anterior and posterior rhinoscopy

examination of Eustachian tube

functional examination of nose

trans illumination test

examination of cranial nerves

examination of cervical lymph nodes

nasal endoscopy

Therapeutic skills

Anterior/posterior nasal packing

Foreign body removal from nose

Cauterisation of little's area

Airway management

Nasogastric feeding

Endotracheal intubation

Cardiopulmonary resuscitation

Administration of oxygen

Venepuncture and establishment of vascular access

Administration of fluids, blood, blood components, parenteral nutrition

Common dressings

Abscess drainage

Basic principles of rehabilitation.

Diagnostic Nasal Endoscopy

Middle Meatal Antrostomy

Posterior ethmoidectomy

Sphenoidectomy

Adenoidectomy

Trans Sphenoid Pituitary Surgery

Endoscopic DCR

Endoscopic orbital decompression

Endoscopic optic nerve decompression

CSF leak closure

Endoscopic Medial maxillectomy

Chanal atresia repair

Endoscopic JNA excision

Endoscopic sphenopalatine artery ligation

Endoscopic Septoplasty

schedule of postings:

ENT department - 9 months

Pulmonary medicine - 2 weeks

Radiotherapy -1 week

Radiology -2 weeks

Microbiology -1 week

Pathology -1 week

Research methodology (*DIDACTIC*) - 1 week

Research (*project*) and Preparation of project report - 1 month

At the end of training the trainee is expected to be competent in:

Diagnosis and management of common rhinological conditions

Evaluative and management protocol for allergy

Diagnostic nasal and sinus endoscopy

Treatment of sinonasal malignancies

Basic and advanced endoscopic sinus surgery

Basic skills in diagnosis and treatment of sinonasal emergencies

Evaluation and counseling of patients with olfactory disturbances

TEXT BOOKS

1. Functional Endoscopic Sinus Surgery - 1991 Stammberger
2. Essentials of functional Endoscopic sinus surgery - 1993 Stammberger.
Hawke
3. Allergy and Immunology (An otolaryngologic approach) 2002 John H. Krouse
4. Rhinoplasty (The art and the science) Vol.1 - 1997 Tardy, Jr.
5. Rhinoplasty (The art and the science) Vol.4 - 1997 Tardy, Jr.
6. Powered Endoscopic sinus surgery - 1997 Krouse, Christmas,
Jr.

Endoscopic Paranasal sinus surgery 3rd Edition 2004 Rice/Schaefer

Endoscopic sinus surgery 2nd Edition 2007 Wormald

(ANATOMY, Three – DIMENSIONAL Reconstruction, AND SURGICAL Technique)

Otolaryngology Vol.3 Coates Schenck Miller

The comparative anatomy and physiology 1958

Negus of the Nose and paranasal sinuses

Nasal and Sinus surgery 2001 Marks

Rhinologic and sleep apnea surgical Techniques Metin Onerci

Rhinologic and Sleep Apnea surgical Techniques 2007 Kountakis Onerci.

Rhinologic and sleep apnea surgical treatment Infakies

Allergy and Asthma (*A TROPICAL view*) 2001 Wiqar A Shaikh

Scott - Brown's Diseases of the Ear, Nose and Throat 1971 John Ballantyne,

3rd Edition Vol.3 John Groves

Scott - Brown's Diseases of the Ear, Nose and Throat 1979 John Ballantyne

4th Edition Vol.3 John Groves

Rhinology (Scott - Brown's Otolaryngology) 5th Edition Mackay Bull

Rhinology (Scott - Brown's Otolaryngology) 6th Edition Scott

Investigative Rhinology 2004 Scadding Lund

Advanced Endoscopic sinus surgery 1995 Stankiewicz., M.D

Atlas of Rhinoscopy 2000 Yanagisawa. M.D

Surgical Management of sleep apnea and snoring 2005 Jerris, Goode

The Nasal cavity and paranasal sinuses 2001 Navarro

The principles and practice of Rhinology 1987 Goldmam

Chronic Rhino sinusitis 2001 Sood

Beautiful Nose (The Inside story)

Cummings otolaryngology head & neck surgery 4th edition Haughey

JOURNALS

Journal of Laryngology and otology

Laryngoscope

Otolaryngologic Clinics of North America

Annals of Otology, Rhinology and Laryngology

Otolaryngology Head and Neck surgery

Acta Otolaryngologica

Archives of Otolaryngology, Head and Neck Surgery

Head Neck

International Journal of Pediatric Otolaryngology

ENT journal

Indian Journal of Otolaryngology