



FELLOWSHIP PROGRAMME IN OTOTOLOGY AND NEUROTOLOGY FELLOWSHIP

(TWO-YEARS FELLOWSHIP)

**Department of Otorhinolaryngology
Postgraduate Center
College of Medicine**

King Saud University
Riyadh, Saudi Arabia

Introduction

The vast majority of the prominent graduates of King Saud University (KSU) fellowship training program have molded their own distinct identity in their chosen fields particularly in the specialty of Otorhinolaryngology Head and Neck Surgery (ORL, H and N surgery). These graduates have gone a long way and have proven their worth. Most of them are currently contributing with their respective shares in extending training to the would-be fellows, as well as holding prestigious positions in different hospitals within and/or outside the kingdom.

Each fellowship program is closely scrutinized and reviewed periodically by the postgraduate committee of the ORL, H and N surgery department.

History

The Department of ORL College of Medicine at KSU has a great history in training graduates and fellows in ORL in Saudi Arabia. Initially, the postgraduate training program started with a diploma program in 1982. This was followed by a four year KSU fellowship 1988. In early 2000, this fellowship program was combined with the Saudi Board training program comprising a well established five years program. Several general ORL H and N surgeons have graduated from this program with an exceptional quality, and extensive knowledge and training.

In 2003, the division of Otology/Neurotology initiated the Otology/Neurotology Fellowship program to offer an in-depth, high quality, 2 years subspecialty program aiming to graduate highly qualified and well trained fellows in the field of Otology/Neurotology.

Objective

The objective of the program is to produce a specialist in neurotology who has achieved competencies in most of the ear diseases.

General Guidelines

1. The duration of the sub-specialty training program is 2 years.
2. The fellow will be under the close supervision of the Otolaryngology/Neurotology group.
3. The start date of the fellowship program is **1st October** each year. The application deadline is **15th March** of the academic year preceding the fellowship.

Prerequisites/Selection Criteria

To be admitted to Otolaryngology/Neurotology subspecialty program, candidate must:

1. Be a graduate of an approved school of Medicine.
2. Be a Board eligible/Board certified otolaryngologist.
3. Provide a letter of release and sponsorship as a full-time fellow for whole durations of the training.
4. Successfully complete the admission exam and/or the interview.
5. Provide (2) reference letters from consultants with whom the candidate is currently working or has recently worked with for a minimum period of six months.

Goals and objectives of training:

GENERAL OBJECTIVES

Otologist and neurotologist must possess a sound knowledge in the general principles of medicine and surgery. During the course of training, the fellow will acquire satisfactory knowledge of the principles common to all ear surgical practice. Otolaryngology and neurotology embraces some components of neurology, neurosurgery, plastic surgery, dermatology, pathology and other specialties. The candidate must have sufficient knowledge in these fields as it relates to the specialty.

During the course of training, the fellow must develop clinical competence and detailed knowledge of the scientific rationale for the medical and surgical management of ear disorders in patients of all ages. This includes knowledge of the techniques of otology, neurotologic, neuro, and cosmetic surgeries and radiation. In addition, the fellow should be able to develop special expertise in the diagnosis and medical/surgical management of diseases and disorders related to disciplines within otology/neurotology such as: auditory system, vestibular system, facial nerve, temporal bones and related skull base structures, tumors, and other lesions of the cerebellopontine angle and lateral skull base.

The fellow must demonstrate the knowledge, skills, and attitudes relating to gender, culture, and ethnicity pertinent to otolaryngology. In addition, they must demonstrate the ability to incorporate these matters in research methodology, data presentation, and analysis.

Upon successful completion of the educational program, the graduates physicians will be capable to function as a consultant otologist and neurotologist.

Program Certification:

The fellowship is an accredited program by the department of Otorhinolaryngology Head and Neck Surgery at College of Medicine, King Saud University.

Resources and facilities

King Abdullah University Hospital (KAUH) is a tertiary care academic hospital attached to the College of Medicine, KSU, Riyadh. It is located in the central area of Riyadh. The university hospital specializes in ORL H and N surgery and ophthalmology with a capacity of 104 in-patient beds. The total annual ambulatory visits to all departments are approximately 305340, and these include 101705 emergency visits. There are about 300881 visits to the ENT clinic each year. The surgical case load is approximately 4459 surgeries/year (approximately 25% are otology and neurotology related). All procedures are performed in the main OR in KAUH with 3 rooms being in use each day. Moreover,

some neurotology and lateral skull base cases will be performed at King Khalid University Hospital (KKUH).

(1) Teaching staff:

At present, the physicians staff consists of three, committed, full time Otologists with massive experience in teaching and training in the Otology/Neurotology subspecialty.

(2) Equipment:

The ORL department at KAUH is a highly equipped center. All examination and operating rooms are equipped with the latest, top of the line instruments (neuro-navigator, stapes set and prosthesis, drills, facial nerve monitor....etc) and video documentation facilities in addition to excellent Radiology and Pathology services.

The scientific/academic computing center located in KKUH aids fellows, staff, and faculty in the scientific computing, including how to use the center's computers, statistical analysis, data acquisition, analysis techniques, research methodology, and mathematical/analytical methods.

(3) Surgery:

Surgery includes a wide array of office procedure, routine Otology/Neurotology surgery as well as complex and revision surgery. The temporal bone lab is used to carry out experiments on human biological material.

(4) Capacity:

The Otology/Neurotology fellowship program is very competitive and is limited to **ONE** candidate per year (this number is based on cases load).

(5) Training committee:

The training committee is comprised of the Otology/Neurotology consultants at the ORL, H and N Surgery Department of College of Medicine at KSU. Participating consultants in Otology/Neurotology fellowship program are members at the program board committee and they will evaluate the program progress and candidates performance.

Structure and content of the program

a- Educational

1. **Academic half day**

The academic half day represents three hours of teaching time for the resident every Tuesday from 2:00 to 5:00 p.m. Fellows will be excused from their clinic duties at this time to attend this half day if it is related to the sub-specialty. This day is structured with heavy resident input and includes didactic and interactive teaching sessions covering all of the major areas of general otolaryngology and the representative subspecialties of the field. In addition, special emphasis is placed on areas of perceived weakness such as otology and neuro-otology. It is also a forum for teaching the competencies, ethics, medical legal issues, and subjects in fields related to otolaryngology. Attendance on these days is encouraged, and the fellow is expected to participate in this teaching.

2. **Clinical meetings**

The clinical meetings are every Tuesday from 1:00 to 2:00 pm. Most presentations are made by the attending staff and residents in the teaching program. However, presentations are occasionally reserved for visiting professors from around the world with international reputations, or invited clinicians from the KKUH milieu. The meetings allow the fellows to critically review the literature pertaining to a specific case or small series of cases, and present that literature to their peers and staff in otolaryngology. Attendance for these meetings is mandatory.

3. **Group rounds**

Each ORL group has pre-op and post-op rounds once a week. The rounds are designed with heavy fellow input as to the operative management of the patients.

4. **Journals clubs**

Journal clubs are held 7 times a year on a Wednesday afternoon. Interesting cases are usually presented and are followed by a update on the topic presented. The papers are presented in a PowerPoint format with the presenting resident/fellow highlighting key points. The resident, the fellow, and the attending staff then critically review the paper.

5. **Guest speakers**

Guest speakers are scheduled on a regular basis throughout the academic year. Speakers are usually asked to give a pre-selected lecture on a Tuesday afternoon. The guests are invited well in advance, and the entire department is notified through ENT bulletin boards at each respective hospital. Verbal announcements are also made at university rounds concerning guest speakers.

6. **Promotion Exams**

There are one in-house training exam that is held once a year (usually September). The Exam includes MCQs (30 %), written and OSCE (30 %), and orals (40%).

b- Clinical

The fellow will participate “hands on” in all Otology/Neurotology clinics and in the operating room. The fellow’s clinical schedule mirrors that of the director of Otology/Neurotology fellowship program. Specifically, the fellow will receive clinical training during the two, weekly Otology/Neurotology clinics and the surgical training in the operating room twice per week. Additional clinical teaching takes place during hospital rounds on Otology/Neurotology patients and during the course of the emergency Otology/Neurotology cases only. The fellow is clinically involved in call from home at the time of the rotation of the mentor of Otology/Neurotology fellowship taking call (approximately 1 in 2).

c- Research

The fellowship program provides numerous opportunities for clinical and basic scientific research in the areas of ear infection, hearing loss, and balance disorder. Fellows have to develop research proposals under the direction of the fellowship director with full departmental support to present the work at the major meetings in Saudi Arabia or abroad. The fellow is also required to conduct at least two research experiments during his/her training, and this research part will be included in the final evaluation and the end of each year

d- Elective period

The fellowship provides opportunity to do elective training, courses, or gain more experience in a higher center worldwide as arranged by the university department or by the candidate himself after approval of the program board.

The fellow will be given the opportunity to join any local otologist/neurotologist after being approved by the committee of fellowship for at a least a month provided that 50% of the training is conducted at the university hospital.

Fellow Supervision and Patient Care Responsibilities

Fellows are closely supervised during the first quarter of the fellowship. As the fellow matures, patient care independence is allowed, however, under the supervision of the fellowship director. At the completion of the fellowship, the fellow is able to evaluate and manage most of the diseases related to the ear and lateral skull base.

Patient care responsibilities

1. Examine and evaluate patients in the Otology/Neurotology clinics.
2. Supervise the preparation process for patients requiring Otology/Neurotology surgery.
3. Round on Otology/Neurotology in-patients.
4. Supervise otolaryngology residents on the Otology/Neurotology rotation.

5. Participate in the care of emergency Otology/Neurotology patients.
6. Be involved in any Otology/Neurotology emergency patients even belongs to general otolaryngologist.
7. Be the primary physician of all Otology/Neurotology cases referred by the department and others.

1. Procedural Requirements

The following procedures are performed during the fellowship:

Fellow and fellowship supervisors should be aware that the university hospital is a residency training hospital and fellows should not compete with the residents for their cases. The residents have the priority to any case that is classified as a "resident" case and the fellow should observe, train, and provide help as needed for the residents handling these cases.

Operations	Surgeon	Supervisor
Myringotomy and tube placement under LA	10	20
Epley maneuver	10	20
Canaloplasty	10	20
Facial nerve anastomosis	5	0
Endoscopic ear exam	10	20
Transtympanic Gentamicin Therapy	10	20
Tympanoplasty	10	30
Mastoidectomy	20	10
Canal wall up	10	5
Canal wall down	10	5
Mastoid obliteration	5	0
Cochlear Implantation	10	0
Stapedectomy	10	0
Ossiculoplasty	20	5
Placement of Bone Anchored Hearing Aids (BAHA)	5	0
Facial Nerve Rehabilitation for Facial Paralysis	5	0

ENG	10	0
Posturography	10	0
A.B.R.	10	0
P.T.A.	10	0
ECoG	10	0
Impedances	10	0
Skull Base Tumor (Different Approaches)	15	
Translabyrinthine Approach		
Middle Cranial Fossa Approach		
Retrosigmoid Approach		
Transcochlear/Transotic Approach		
Infracochlear Approach		
Retrolabyrinthine Approach		
Infratemporal Fossa Approach		

2. Didactic Components

- a. Attend all department conference pertaining to Otology/Neurotology.
- b. Assist in implementation of annual Otology/Neurotology CME program
- c. Give 1 updated Otology/Neurotology research in the department clinical presentation/year
- d. Give 6 lectures/year to otolaryngology residents.
- e. Review a minimum of 4 journal articles per year.
- f. Attend the otolaryngology journal club every month and proctor Otology/Neurotology papers being discussed.
- g. Supervise resident cadaver training dissection.
- h. Supervise the usage of Otology/Neurotology laboratory dissection materials.
- i. Attend all otolaryngology clinical meetings.
- j. Attend all tumor board conferences where lesions of the ear and lateral skull base are presented.

- k. Provide one resident's seminar every 2 months, whereby the residents select the topic and he/she supervise the discussion. Exam type discussion is encouraged.

The fellow will be required to

- Attend minimum of one faculty development program held at postgraduate Department in the College Medicine KSU.
- Complete basic and advanced Temporal bone lateral and skull base courses.
- Participate in preparation of all the Otology/Neurotology division courses and is considered as a member in all Otology/Neurotology Committees.
- Attend at least one conference (national or international) related to Otology/Neurotology per year.
- Prepare at least 2 peer review publications.

Year one

*** First three months:**

- Head and Neck Cadaver dissection in the anatomy department, College of Medicine K.S. U. (one day). Open accessibility to temporal lab.
- Research day in collaboration of research center, College of Medicine K. S. U. (one day)
- One day plastic/Neurology clinic
- Electrophysiology of facial nerve/ neurosurgery clinic (3 moths each)
- One day operation room

*** Second nine months:**

- One day research
- Audiology/Balance rotation
- One day Otology/Neurotology clinic
- One day operation room
- One day pre & post operation round

Year Two:

* First three months: Skull base rotation

- Neurosurgery
- Radiation
- Oncology
- Radiology
- One day research

* Second nine months:

- One day clinic
- One day pre & post operation round
- One day OR
- Two days research

Evaluation

The fellow will be evaluated on the following items using postgraduate evaluation scale from one to 5; 1 being the lowest or very poor performance and 5 being the highest or excellent performance:

Final Exam

Final exam will be at the end of second year (September). The exam includes MCQs (30 %), written and OSCE (30 %) and orals (40%).

Fellow Job Description

Title: Otolaryngology/Neurotology Fellow

Department: Department of ORL H & N surgery, College of Medicine, KSU

Terms of Employment:

- 1) KAUH, Riyadh
- 2) ORL H & N Department, KSU, Otolaryngology/Neurotology division

Functions:

a) General:

- For supporting ORL administrative patient care policies and protocols
- For ensuring exemplary Otolaryngology/Neurotology patient care is provided to those Patient under his / her care
- For working cooperatively with all the other staff to ensure exemplary patient care
- Attends rounds promptly

b) Specific:

- To help (with the resident) in looking after critically ill patients
- Review, prepare and complete all the medical records of the Otolaryngology/Neurotology patients

c) Evaluation:

- Assist in the evaluation of residents, medical students, and interns.

d) Teaching:

- Participate in the teaching of medical students, residents, interns, nurses, and patients.

f) Others:

- Assume responsibilities for the development and maintenance of own professional competency.

g) At the end of his/her training, the fellow must:

- Demonstrate competency of Otolaryngology/Neurotology Procedures and skills in the use of technology.

- Demonstrate the ability to assess the Otology/Neurotology patient by
 - 1) Appropriate patient's history documentation and physical examination
 - 2) Selecting appropriate investigations
 - 3) Interpreting investigations

- Make management plan for all Otology/Neurotology problems
- Demonstrate effective communication skills
- Demonstrate academic qualities pertaining to Otology/Neurotology
- Demonstrate effective teaching of the residents
- Participate in research work of the department
- Understand the relevant aspects of staff management and Administration pertaining to high intensity of work

h) At completion of two years Otology/Neurotology program and passing all the exams and evaluation, the King Saud University fellowship in Otology/Neurotology will be awarded to the candidate from postgraduate of medicine in K.S.U.

General Rules and Regulation: Accordance to the rules and regulations of KSU

1) Admission Processing

The Postgraduate Medical Education (PGME), Medical Education Center will accept and perform the preliminary review of applicants and forward applications to the program director. The Departmental Residency Committee will then conduct the interview and or selection exam and recommends candidates for acceptance using the special form for selection of candidates (Appendix IIIA of the KSU Policies and Procedures). Results will be forwarded to the Director of the Postgraduate Training Programs, who will forward the results to the Vice Dean of Postgraduate and Continuing Medical Education and the

Dean of the College of Medicine. Upon approval of the results the PGME will write acceptance letters to the accepted candidates.

The training will commence at the beginning of academic year – 1st of October. The accepted candidates will be registered with the Deanship of Admissions and Registrations.

Deadline for the submission of application will be 15th of March.

2) Rotations

Two years including otology/ neurotology, neurosurgery, radiology, neurology and plastic rotations.

3) Teaching commitments must be protected

4) Number of on call

- The candidate will be assigned a shadow on-call with the fellowship staff for otology and neurotology cases (no more than 1 in 2).

5) Withdrawal

A valid reason for withdrawal must be given in writing to the Otology/Neurotology program director. Submission of withdrawal should be made 3 months before the end of the training year to the Departmental Residency Committee (DRC) which will refer the request to the Postgraduate Training Board (PGTB) with recommendations. The final decision will be made by the PGTB who will give their final reasons in writing. In case the withdrawal was rejected by the PGTB and the resident left the program without permission, he will not be allowed to join any other programs for one year.

6) Disciplinary actions

Disciplinary actions will be in accordance with the KSU Residency Training Programs Policies and Procedures. Any resident exhibiting poor performance or misconduct will

be thoroughly discussed in the (DRC) and the policies and procedures will be applied. In case of dismissal from the program, the DRC has to refer the matter to the PGTB for appropriate decision. The PGTB will then forward the matter to the Vice Dean of the Postgraduate and Continuing Medical Education.

7) Vacation

- * Must be according to the postgraduate guidelines, please refer to the KSU Residency Training Programs Policies and Procedures.
- * The fellow is entitled to a four (4) weeks vacation per year and should be approved by the director of Otolaryngology/Neurotology Fellowship program and in accordance with the Department protocols.
- * The fellow should have one of the Eid Holidays.
- * Justified absence from the program such as sick and maternity/paternity leave should be compensated if more than 1 week/year.
- * Educational leave will be granted to attend one hands-on course a year and one international conference a year. If the candidate is presenting his / her research, he /she can attend any additional number of meetings to present his / her work.

The elective training period for minifellowships are not to be part of the educational leaves.

Suggested Readings

It is highly recommended that each fellow read the following:

1. Otolaryngology/Neurotology part of general textbooks of otolaryngology general reference (i.e.) Cummings, Scott-Brown, Bailey and Ballenger)
2. Otolaryngology set of SIPAC's (self-instructional packets from AAO-HNS)
3. Otolaryngology Clinics of North America series
4. Computer applications SPSS:Data management program
5. Otologic surgery (Brackman)

6. Imaging of the temporal bone (Swartz)
7. Middle ear and mastoid microsurgery (Sanna)
8. Vestibular disorders A case-Study Approach (Furman)
9. Handbook of Balance function testing (Jacobson)
10. Clinical neurophysiology of the vestibular system (Baloh)
11. Dizziness, hearing loss and tinnitus (Baloh)
12. How to write and publish a scientific paper (Day)
13. Reference Manager program