



**FELLOWSHIP PROGRAMME IN
RHINOLOGY AND SKULL BASE SURGERY**

(TWO-YEAR FELLOWSHIP)

**Department of Otorhinolaryngology
Postgraduate Center
College of Medicine, King Saud University**

Riyadh, Saudi Arabia

King Saud University College of Medicine
King Abdulaziz University Hospital
ORL Department

Introduction:

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. There are now two subspecialty clinical experience programs at the Department of ORL. One of these is Rhinology. It complies with the standard of the equivalent internationally certified programs.

History

The Department of ORL College of Medicine, KSU has great history in training Graduates and Fellows in ORL in Saudi Arabia. Initially the postgraduate training program was started with diploma program in 1982, this was followed by a four year K.S.U. fellowship 1988 which in early 2000 was combined with Saudi Board training program comprising a well-established five years program. This program graduates will be well qualified general ORL H and N surgeons with good knowledge and training.

In 2003 the division of Rhinology started the Rhinology Fellowship program to offer a 2-year subspecialty program aiming to graduate highly qualified, safe and well-trained fellows in the field of Rhinology.

2-YEAR KSU FELLOWSHIP IN RHINOLOGY AND SKULL BASE SURGERY

Goals and objectives of training:

To provide a broad experience in the surgical, clinical and basic science aspects of Rhinology and Skull Base Surgery and by the end of the two-year period, the Candidate shall:

1. Have a good exposure to all diagnostic, surgical and medical therapeutic cares of nose and paranasal sinuses disorders.
2. Have adequate exposures to advanced imaging techniques related to the field of rhinology such as CT and MRI and be able to identify the radiological sinonasal pathology at a clinician level.
3. Assess the role of imaging guided surgery, its application in sinonasal disorders.
4. Be trained in the extended uses of FESS and endoscopic managements of anterior skull base defect and tumors.
5. Managing allergic disorders
6. Learn the pathology and treatment of olfactory disorders.
7. Be trained on self-updated learning and identify the available resources.
8. Develop the skills of conducting and supervising research related to basic science and clinical aspects of Rhinology and Skull Base Surgery.
9. Having teaching responsibility in the field of Rhinology and be able to promote the Science of Rhinology. Develop leadership in the field of Rhinology by which the Candidate will help to improve the current standard of care and educated others

PREREQUISITE/SELECTION CRITERIA:

To be admitted to Rhinology and Skull Base Surgery subspecialty program, Candidate must:

1. Be a Board eligible/Board certified Otolaryngologist or equivalent.
2. Provide a letter of release and sponsorship as full time commitment for the whole period of training.
3. Pass the admission examination and/or interview.
4. Provide 2 references letters from Consultants with whom the Candidate is currently working or has recently worked with, for a minimum period of six months.

General Guidelines

1. The duration of sub-specialty training will be two (2) years.
2. The fellow will be under the close supervision of the Rhinology group.
3. The start of the fellowship **1st working day in January** in each academic year.
4. The application deadline will be in **November** of the academic year preceding the Fellowship.
5. This training includes didactic sessions, clinical care, research opportunities and medical and surgical experience.

Program Certification:

The fellowship will be an affiliated program affiliated to the Department of Otorhinolaryngology Head and Neck Surgery at College of Medicine, King Saud University (KSU) and it will be accredited by KSU as King Saud University Fellowship in Rhinology and Skull Base Surgery.

Resources and facilities

King Abdulaziz University Hospital (KAUH) and **King Khalid University Hospital (KKUH)** are a tertiary care academic hospital attached to the College of Medicine, King Saud University, Riyadh. **King Fahad Medical City (KFMC) is an affiliated hospital where the fellows will have a rotation period in Otorhinolaryngology Head & Neck Department.** It is located in central area of Riyadh. The University Hospital is a specialized hospital for Otorhinolaryngology Head & Neck surgery and ophthalmology with a capacity of 104 inpatient beds. Total ambulatory visits to all departments are approximately 305340 annually including 101705 emergency visits. There are about 300881 visits to ENT clinic each year.

King Fahad Medical City, a tertiary care hospital in Riyadh, is located 5.9 km away from KAUH.

The department's surgical case load is approximately 4459 per year. Out of this number, **240 average rhinology cases have done every year.** All procedures are performed in the OR in KAUH, KKUH **and KFMC.**

1. Teaching staff

At present physician staff consists of eight full time Rhinologists with experience in teaching and training in the Rhinology and Skull Base Surgery subspecialty. In addition the other teaching Staff of the Department will also help in accomplishing the program objectives as well as the consultants in the affiliated hospitals.

2. Equipment

The ORL department in KAUH, KCUH and KFMC are a highly equipped center. All examination rooms and operating rooms are equipped with updated and latest instruments and video documentation facilities in addition to excellent Laboratory, Radiology and Pathology services.

3. Surgery

Surgery includes a wide array of office procedure, routine rhinology surgery as well as complex and revision surgery using imaging-guided techniques. Rhinology laboratory dissections will be carried out on human biological material using advanced instrumentation.

A variety of research opportunities are offered in collaboration with research department of College of Medicine, KSU to perform basic and clinically orientated research projects.

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

4. Capacity

The number of Candidate in the program going to be accepted in the Rhinology and Skull Base Surgery fellowship is two Candidates per year.

In addition, there are other teaching staffs from other department such as Allergy Ophthalmology and Neurosurgery.

STRUCTURE AND CONTENT OF THE PROGRAM

1. Clinical

The fellow will participate “hands on” in all Rhinology and Skull Base Surgery clinics and in the operating room. The fellow will receive clinical training during Rhinology full-day clinics per week and surgical training in the operating room twice per week. Additional clinical teaching takes place during hospital rounds on rhinology patients and during the care of emergency rhinology cases. The fellow is clinically involved in call from home in the rotation of the mentor of Rhinology fellowship taking call (approximately 1-2 in 7).

Additionally, the Fellow will be involved in trans nasal endoscopic approach for intracranial tumor resection & reconstruction with neurosurgical team at least once per week.

2. Research

The fellowship provides numerous opportunities for clinical and basic science research in the areas of allergic fungal rhino sinusitis, hyperplastic sinusitis-nasal polyposis, molecular biology of chronic sinusitis, microbiology of sinus infections and clinical/surgical outcomes. Fellows are encouraged to develop research proposals under the direction of the fellowship director with full Department support to present the work at the major meetings in Saudi Arabia or abroad

Policy with regards to the Fellow(s)' research aspects will be as follows

1. The first 3 months

1.1 Fellow(s) will have at least two research Proposal(s)

1.2 The two proposals have to be submitted to Institutional Review Board (IRB)

1.3 Attending Courses in research

1.4 Minimal clinical works, to attend clinic only

1.5 The Fellow has to fulfill all these so that he can start his full clinical duty.

2. Requirements for promotion to F2 (year 2)

2.1 Fellow has to present in the update seminar at least one of his/her research.

2.2 At least one of the researches has to be sent for publication.

3. Requirements to sit for final exam

3.1 Fellow has to have two (2) ISI publications or

3.2 One (1) ISI publication and one (1) Non ISI publication with two presentation in International conferences of his/her research project(s)

4. Fellow must be the 1st Author on the research projects.

5. The Committee approved that case report is not acceptable and excluded in the research provision for fellows' program structure.

3. Elective period

The fellowship provides opportunity to attend Mini fellowship, courses or get more experience in higher center worldwide as arranged by university department or by candidate himself after approval of the program board.

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, still under the supervision of the fellowship director. At the completion of fellowship, the fellow is able to evaluate and manage all medical disease related to the nasal cavity and paranasal sinuses.

Patient care responsibilities

1. Manage Rhinology patients in the Rhinology clinics.
2. Be fully in-charge (in coordination with his senior) of all inpatients and out-patients in Rhinology service.
3. Supervise otolaryngology residents on the Rhinology rotation.
4. Participate in the care of emergency Rhinology patients.
5. Receive consultations of all Rhinology cases referred from the department or from others.

1. Procedural Requirements

The following procedures are performed during the fellowship as surgeon or teaching assistant:

Operations	# of cases
Endoscopic ethmoidectomies	150
Endoscopic middle meatal antrostomies	150
Frontal sinusotomies	100
Mintrephination of the frontal sinus	10
Extended Approaches to the frontal sinus The Modified Endoscopic Lothrop procedure	15
Sphenoidotomies	80
Nasal polypectomies under local anesthesia	25
Biopsy of nasal masses	50
Cauterization & control of bleeding in epistaxis	25
Benign tumors of the anterior skull base	5
Endoscopic medial maxillectomy	5
Endoscopic orbital Decompression	5
Cerebrospinal fluid rhinorrhea repair at least	8
Image guided sinus surgery	50
Endoscopic Dacryocystorhinostomy	5
Sphenopalatin artery ligation & Vidian neurectomy	5
Optic nerve decompression	3
Surgery of the choanal atresia	15
Surgery of Nasopharyngeal Angiofibromas	3
Surgery of Familial haemorrhagic telangiectasia	3
Turbinate surgery	150
External frontoethmoidectomy	3
Surgery of the wide nasal cavity	5
Other approach to the nasal cavity, sinuses and skull base - Lateral rhinotomy	5

- Sublabial rhinotomy	
Endonasal and external approach of functional reconstructive nasal surgery of: - Nasal septum - Bony and cartilaginous pyramid - Nasal lobule	80
Closed Rhinoplasty	25
Open Rhinoplasty	25

2. Didactic Components

- 2.1 Attend all department conference pertaining to Rhinology.
- 2.2 Assist in implementation of annual Rhinology CME program.
- 2.3 Give 1 updated Rhinology research in the department clinical presentation/year (at least mandatory and pre-requisite to complete the program).
- 2.4 Give 2 department's otolaryngology resident lectures/year. Lecture topics included: Allergic Fungal Sinusitis, Nasal polyposis, Frontal Sinus disease and Chronic Sinusitis: Evaluation, Management and Treatment outcomes.
- 2.5 Serve as a peer reviewer of a minimum of 4 journal articles per year.
- 2.6 Attend otolaryngology journal club every month and proctor rhinology papers being discussed.
- 2.7 Supervise resident cadaver training dissection.
- 2.8 Supervise all use of Rhinology laboratory dissection materials.
- 2.9 Attend all otolaryngology clinical meetings.
- 2.10 Attend all tumor board conferences where lesions of the nose, sinuses and anterior skull base are presented
- 2.11 Provide twice a month residents seminars whereby the residents select the topic and he/she supervise the discussions. Exam type discussion is encouraged.

The fellow will be required to:

1. Study epidemiology, statistical methods, experimental design, and manuscript preparation, including literature searches and the use of computerized and internet databases, so needs to complete a course in statistics in the first year.
2. Completion of basic and advanced FESS and Rhinology courses (abroad, and encouraged to attend hands-on courses).
3. Participate in preparation of all the Rhinology division courses and considered as Member in all Rhinology Committee.
4. Participation in at least 2-4 weeks mini fellowship or clinical attachment (abroad) to see and manage advanced and difficult rhinology cases and surgery after approval of the program director.
5. Attend at least one conference (National or International) on Rhinology per year.
6. Present and publish at least one paper every year.

A suggested division of time and duties for the full two-year period is as follows:

A. YEAR ONE

1. First 3 months – full research with minimal clinical work - 1 day clinic

2. Next 3 months

2.1 Research day in collaboration of research center, College of Medicine KSU (one day).

2.2 Clinical and operative duty based on the schedule approved by the training board

3. Next 6 months

3.1 Clinical and operative duty based on the schedule approved by the training board

3.2 One (1) day research

B. YEAR TWO

1. Clinical and operative duty based on the schedule approved by the training board

2. One (1) day research

Evaluation

The fellow will be evaluated on the following items using postgraduate evaluation scale from one to five; 1 being the lowest or very poor and/o unsatisfactory performance and 5 being the highest or excellent performance: (1 = unsatisfactory performance; 2= below average; 3= Average; 4= above average; 5= Excellent)

1. Patient care – compassionate, appropriate and effective for the treatment health problems and the promotion of health in Saudi Arabia
2. Medical knowledge – established and evolving biomedical, clinical and cognate (epidemiological and social behavioral) sciences and the application of this knowledge to patient care.
3. Practice-based learning and improvement - involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence and improvements in patient care.
4. Interpersonal and communication skills – that result in effective information exchange and teaming with patients, their families and other health professionals.
5. Professionalism - as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population.
6. System based practice – as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
7. Research - Feedback and overall impression on-going and /or complete research of the Fellow.

Fellow Job Description

Title: Rhinology and Skull Base Surgery Fellow

Department: 1. Department of Otorhinolaryngology Head & Neck Surgery, College of Medicine, KSU
2. Department of Otorhinolaryngology Head & Neck Surgery, Rhinology Division, King Fahad Medical City

Academic: 1. Graduate of approved school of Medicine
2. Board certificated or eligible otolaryngologist

Experience: 1. Demonstrate clinical competency to work at a fellow level
2. Potential medical supervisory skills
3. Potential teaching skills
4. Demonstrate ability to promote good interpersonal relationship

Terms of Employment:

1. Department of Otorhinolaryngology Head & Neck Surgery, College of Medicine, KSU
2. Department of Otorhinolaryngology Head & Neck Surgery, Rhinology Division, King Fahad Medical City

Functions:

A. General

1. Supporting ORL administrative patient care polices and protocols.
2. Ensuring exemplary Rhinology patient care is provided to those patients under his/her care.
3. Working cooperatively with all the other staff to ensure exemplary patient care.
4. Attends rounds

B. Specific

1. Looking after critically ill patients.
2. Review, prepare and complete all the medical records of the Rhinology patients.

C. Evaluation

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

D. Teaching

1. Participates in the teaching of Medical Students, Residents, Interns, Nurses and patients.

E. Research

1. Undertakes per year a minimum of 2 research project under supervision of the Staff and/or Supervisor, although, it is not limited to 2 research project if the Fellow has more than 2 research project and this will be as well approved and supported by his training Supervisor(s) and by the Department. (see the above provision on research).

F. Others

1. Assumes responsibilities for the development and maintenance of own professional competency.

G. At the end of his/her training, the trainee should meet the following objectives:

1. The trainee(s) will be able to demonstrate competency of Rhinology and Skull Base Surgery procedures and skills in the use of technology
 2. Demonstrate the ability to assess the Rhinology patient by:
 - 2.1 Appropriate history taking and physical examination
 - 2.2 Selecting appropriate investigations
 - 2.3 Interpreting investigations
 - 2.4 Making management plan for all Rhinology problems
 - 2.5 Demonstrate effective communication
 - 2.6 Demonstrate academic qualities pertaining to Rhinology
 3. Demonstrate effective teaching of the residents
 4. 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 Rhinology and Skull Base Surgery program and passing all the exams and evaluation, and fulfilling research components of the training,

KSU Fellowship in Rhinology and Skull Base Surgery will be awarded to the candidate(s).

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 review of applicant forms and requirements of the applicants and forward the same 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 letter to the accepted candidates.

The training will commence yearly on the 1st working day in **January**. The accepted candidate(s) will be registered with the Deanship of Admissions and Registrations.

Submission of application from the month of July to September

2. Rotations

New Rhinology fellow(s) should be paired with Rhinology Consultant until their procedures have been certified. A schedule approved by training board has to be followed by the training fellow.

3. Teaching commitments must be protected. The fellow has to be actively participating in the rounds conducted by rhinology training program.

4. Number of on call

Fellow will be assigned on the 3rd on-call in three days

5. Withdrawal

A valid reason for withdrawal must be given in writing to the Rhinology program Director. Submission of withdrawal should be made 3 months before the end of the training year to the Departmental Sub-specialty Fellowship Committee (DSFC) 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 / Fellowship Training Programs Policies and Procedures. Any Fellow(s) exhibiting poor performance or misconduct will be thoroughly discussed in the DSFC and the policies and procedures will be applied. In case of dismissal from the program, the DSFC 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

The fellow is entitled to a four (4) weeks' vacation per year of training. Approval must be from the Director of Rhinology and Skull Base Surgery Fellowship program and in accordance with the Department protocols.

Fellow should work during one of the Eid Holidays.

Justified absence from the program such as sick and maternity/paternity leaves 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 her/his work.

The elective training period for mini fellowships are not to be part of the educational leaves

8. Examination

Candidate who has good performance in the evaluation must also pass the Rhinology and Skull Base Surgery Subspecialty Fellowship Examination distributed in the following criteria with a passing mark of 70%.

8.1 The garnered passing marks is categorized as

- Excellent = 95 to 100%
- Very Good = 90 to 94%
- Good = 76 to 89%
- Pass = 70 to 75%
- Fail = below 70

8.2 Component of exam

- Written Examination = 40%
 - Oral Examination = 30%
 - Evaluation = 30%
-
- 100%

Teaching Staff

1. Prof. Surayie Al-Dousary - Professor, Consultant
2. Prof. Fatima Al Anazi - Professor, Consultant
3. Dr. Saad Al Saleh - Asst. Professor, Consultant
4. Dr. Mohammed Al Oulah - Asst. Professor, Consultant
5. Dr. Ahmed AlRoqi - Asst. Professor, Consultant
6. Dr. Saud Alromaih - Asst. Professor, Consultant
7. Dr. Abdulaziz Al Qahtani - Consultant
8. Dr. Fahad Al Fawwaz - Consultant
9. Dr. Abdulrazag Ajlan- Neurosurgeon, Consultant

SUGGESTED READINGS

It is highly recommended that each fellow read the following:

1. Rhinology part of general textbooks of otolaryngology general reference (i.e.)
Cummings, Scott-Brown, Bailey and Ballenger)
2. Endoscopy of the nose by MESSERKLIGER
3. Essential of functional endoscopic sinus surgery by STAMMBERGER
4. Disease of the sinuses diagnosis and management by KENNEDY
5. Minimal invasive endonasal sinus surgery
6. Endoscopic sinus surgery anatomy three-dimensional reconstruction and Surgical
technique by PETER-JOHN WORMALD
7. Functional reconstructive nasal surgery by EGBERT H. HUIZING
8. Rhinology set of SIPAC's (self-instructional packets from AAO-HNS)
9. Otolaryngology Clinics of North America series
10. Computer applications SPSS: Data management program
11. Reference Manager program