

## ENDOSCOPES IN OTOLOGICAL SURGERY



Endoscopes have been used in the field of ear, nose and throat since the 1980s. The role of the otoendoscope has expanded from a tool for diagnosis to its use as the sole visual device in otological surgeries. With the development of high definition video systems and state of the art endoscopes, ultra high resolution images of the middle ear can be obtained. Here at RAK Hospital, we perform comprehensive otological surgeries using endoscopes.

### Endoscopic Myringotomy and grommet/ T tube insertion -

This surgery is routinely performed using 0 or 30 degree 2.7 mm endoscope.

#### Steps -

- Surgery is performed under general anaesthesia.
- The endoscope is introduced through the transcanal route. Wax and debris is removed from the external auditory canal.
- The tympanic membrane and middle ear effusion is assessed.
- Using myringotomy knife, an incision is made in the anteroinferior quadrant of the tympanic membrane.
- The middle ear effusion is suctioned out.
- Grommet or T tube is inserted via the incision and surgery is completed.

### Endoscopic Myringoplasty/Tympanoplasty -

We perform Transcanal transperforation underlay myringoplasty using 0 degree 2.7 mm or 4 mm endoscope.

#### Surgical procedure is explained thus

- Surgery is performed under general anaesthesia.
- The endoscope is introduced through the transcanal route. Wax and debris is removed from the external auditory canal.
- Assessment of the tympanic membrane, perforation, ossicular chain, middle ear mucosa and eustachian tube orifice is made.
- The edges of the perforation are trimmed using a straight pick and forceps.
- Round knife is used to curette the under surface of the tympanic membrane.
- The perforation size is measured using a 2mm Rosen round knife.
- Perforation is classified as small (1-3 mm), medium (3-5 mm) and large (> 5 mm).
- The tragal cartilage graft is harvested through a small incision.
- Gel foam is placed in the middle ear.
- Graft is placed by the underlay trans canal trans perforation technique.
- External auditory canal is packed with medicated Gelfoam and tragal incision sutured.

Most patients are discharged the same day with a small ear dressing as compared to the bulky mastoid dressing used otherwise, Patient is reviewed in the Outpatient clinic every week for a month and Pure tone audiometry done at the end of a month.

### Advantages of Endoscopic Myringoplasty/Tympanoplasty over conventional microscopic surgery:

- Wide angle of view
- No need to reposition head of patient during surgery
- No post auricular incision
- No tympanomeatal flap
- Minimal or no pain
- Can be performed as a day care surgery
- Shorter operation time
- Better visualisation of middle ear structures
- Better detailing of hidden structures and challenging situations like anterior tympanic membrane perforation, retrotympanum, attic and hypotympanum
- Anatomical variations that hamper the view can be easily overcome
- Reduction of need to drill bone and/or to retract soft tissue to adequately access difficult areas
- Lesser chance of iatrogenic cholesteatoma due to better access to hidden areas
- Eliminate the need for tight pressure mastoid dressings
- Scarless surgery
- More cost effective
- Easily transportable compared to microscopes
- Endoscopes enable close inspection and photo documentation of the surgery

### Challenges of Endoscopic otologic surgery:

- One handed technique
- Steep learning curve
- Injury to external auditory canal
- Loss of depth perception
- Narrow work space
- Issues with the use of drills simultaneously
- Not possible to use exclusively for mastoid surgery especially with cholesteatoma

Other surgical applications include mastoid surgeries, neurotology, stapedotomy and cochlear implantation.

There has been a rapid increase in the use of endoscopes in otology the world over and the department of Otorhinolaryngology at RAK Hospital also is keeping up with the latest updates and techniques. The future of Otoendoscopic surgeries definitely is bright.



**Dr Magdy Thakeb**

Consultant and Head of Department  
Otorhinolaryngology (ENT), Qualification: MD



**Dr Rashmi Kiran Fernandes**

Specialist Otolaryngology  
Qualification: MS-ENT, Head and Neck Surgery

## Welcome Dr Muhja & Dr Anirudh to RAK Family



**Dr Muhja Mohamed Elhassan Gadour**  
Consultant, Obstetrics and Gynecology  
MBBS, MD in Obstetrics and Gynecology,  
MRCOG (UK), FRCOG (UK)  
Over 20 Years of Clinical Experience



**Dr Anirudh Reddy Paidy**  
Specialist Pediatrics  
MBBS, MD, DNB (Pediatrics), Fellowship in  
Neonatology, MBA HHSM (BITS PILANI)  
Over 7 Years of Clinical Experience

## February Promotions

**RAK HOSPITAL**  
Premium Healthcare. Premium Hospitality

**Ankle-Brachial Index (ABI)**  
Test by Doppler: A quick, non-invasive, and simple way to check for Peripheral Arterial Disease

**Who should take this test?**  
Individuals aged 50 or older with a history of diabetes or smoking

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**From Awareness to Action**  
Defeating Diabetes

- ▶ Adhere to medication plan
- ▶ Monitor glucose levels regularly
- ▶ Schedule regular checkups
- ▶ Maintain consistent exercise
- ▶ Choose fiber-rich diet, control sugar intake
- ▶ Manage stress, stay positive

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- ▶ Asthma and allergic disorders.
- ▶ Pneumonia.
- ▶ Chronic Bronchitis.
- ▶ Emphysema.
- ▶ Occupational lung diseases.
- ▶ Tuberculosis, ILD

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**Secret to strong Bones & Joints**

- ▶ Consume calcium-rich foods
- ▶ Get enough Vitamin D
- ▶ Limit caffeine & alcohol
- ▶ Prioritize a balanced diet
- ▶ Engage in regular physical exercise
- ▶ Avoid excess salt
- ▶ Quit smoking

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**DEPARTMENT OF GASTROENTEROLOGY**

GASTRIC EMERGENCIES REQUIRE **IMMEDIATE ATTENTION**

- ▶ Severe abdominal pain
- ▶ Nausea and vomiting
- ▶ Difficulty swallowing
- ▶ Persistent bloating or gas
- ▶ Incontinence

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- ▶ Hydrocephalus
- ▶ Meningomyelocele
- ▶ Craniosynostosis

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## Arab Health (29 Jan - 1 Feb 2024)



## Testimonials

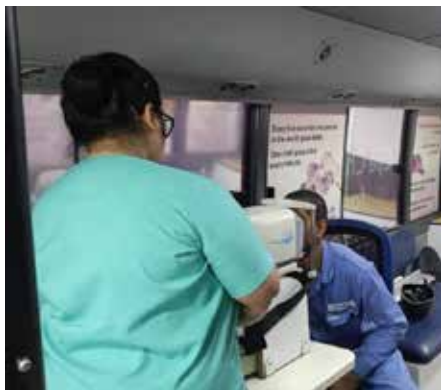


My name is Mrs. Shemy I am proud and fortunate to have a promising doctor like Dr. Rajesh Panda. My sincere gratitude to all RAK Hospital members for saving my husband's life.



My name is Mr. Angok, I had a successful surgery at RAK Hospital. I am happy with the doctors and with all the staff working here. I may say that RAK Hospital is the best hospital I have ever encountered.

## Complimentary Eye Check Up at XCHEM International, Ras Al Khaimah



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