

OTOLARYNGOLOGY



EUSTACHIAN TUBE DILATION – NEW TREATMENT FOR PLUGGED EAR

Dr Vânia Henriques

What is the eustachian tube?

The eustachian tube (ET) is part of the middle ear and links the nasopharynx (back of the nose and throat) to the chamber of the middle ear. The middle ear is normally filled with air that is not in direct contact with the outside atmosphere.

The eustachian tube helps regulate ear pressure ensuring that it remains at near-normal environmental pressure. It is normally collapsed, but gapes open both with swallowing and with environmental pressures. Whenever it fails to open correctly, an incorrect ventilation of the middle ear occurs. This is known as eustachian tube dysfunction (ETD), a common medical issue, affecting at least 1% of the adult population.

What should I feel if I have eustachian tube dysfunction?

Patients suffering from ETD typically complain of hearing loss and/or pressure and/or plugged ear. It can be acute, chronic or recurrent. ETD can include serous effusion, reduced hearing and negative middle ear pressure.

It can lead to impaired quality of life due to persistent sensation of plugged ear, earache and inability to tolerate air travel or scuba diving. In due course, ETD can lead to hearing loss. On examination, retraction pockets, perforation, chronic drainage or middle ear cholesteatoma may be found due to this dysfunction.

Why do I have eustachian tube dysfunction?

The underlying reason for ETD is poorly understood. There is a lack of clear diagnostic criteria, which complicates our ability to study this problem and its potential therapy.

How do I know if I have eustachian tube dysfunction?

Different objective tests can be performed, including impedance audiometry, audiometry and tympanometry, otoscopy and

endoscopy. The scientifically validated seven-item Eustachian Tube Dysfunction Questionnaire (ETDQ-7) is also an interesting tool that can be easily used.

How do I treat my eustachian tube dysfunction?

Currently, there are three options available for the treatment of the ETD: medication, conventional tympanostomy (tube surgery) and eustachian tube balloon dilation.

The first approach is almost always medication. Nasal steroid sprays/oral steroids, nasal decongestants and anti-reflux therapy are usually the first approach.

The classic standard surgical treatment of ETD is the myringotomy with tympanostomy tube placement in the tympanic membrane (TM). This technique controls middle ear pressure and drainage of fluid via the TM, effectively bypassing the eustachian tube. This approach effectively relieves symptoms but does not treat the ET dysfunction. Tympanostomy tubes often need to be replaced multiple times if ET dysfunction persists.

A recent and promising innovation is the use of a balloon to dilate the cartilaginous portion of the ET. This procedure involves the endoscopic placement of a balloon catheter in the cartilaginous portion of the ET, via the

nasopharynx. This catheter is inflated with a different range of pressures (typically 10-12 bar) for a short amount of time and then removed.

ENT appointment, when?

You should schedule an appointment with an ENT specialist if you present plugged ear or underwater sensation, tinnitus, and/or middle ear pressure lasting longer than one month.

What is eustachian tube balloon dilation?

Eustachian tube balloon dilation (ETBD) is a cutting-edge surgical procedure indicated for the treatment of chronic ETD non-responsive to medication.

The procedure has his origin on the long-term use of balloon dilations in the cardiovascular area for the treatment of coronary disease, in acute myocardial infarction and chronic heart disease. Like angioplasty is used to open coronary arteries and avoid heart surgery, ETBD offers the patients with chronic or recurrent ETD the possibility of overcoming this problem.

How is it done?

The procedure can be done under local anesthesia, in the consulting room of the ENT specialist or under general anesthesia in the operating theatre. The insufflation of the balloon will cause some pressure, but no pain, and takes about three minutes.

What are the advantages of balloon sinus dilation?

When it is carried out in the consulting room under local anesthetic, patients can go home and continue their normal daily activity within 24 hours. Determining whether the procedure can be carried out in an outpatient context, needs evaluation by an ENT specialist.

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