

Short Review on Medical Myringoplasty: A Scarless Procedure

Saai Ram Thejas*

Assistant Professor, RVM Institute of Medical Sciences, Telangana, India

***Corresponding Author:** Saai Ram Thejas, Assistant Professor, RVM Institute of Medical Sciences, Telangana, India.

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Tubotympanic type of Chronic Suppurative Otitis Media (CSOM) with a perforation of the Pars Tensa is a very common condition seen in the Rural and Urban population of India. The management of this condition has been adequately undertaken by Surgeons for the past 400 years [1].

With the passage of time, instruments used for this surgical procedure have evolved and so have the surgical skills. Each case is looked at in a different way based on the viewpoint of the operating Surgeon. In the absence of infections of the Nose, Sinuses, Nasopharynx and Mastoid air cells a Type I Tympanoplasty (Myringoplasty) is the best method to achieve complete closure of the perforated drum. In cases of infections of the tympanic cleft which can cause an Eustachian Tube block and ascending infection, one of the two procedures can be taken up –

- Endoscopic Sinus Surgery followed by a Type I Tympanoplasty.
- Canal Wall up Mastoidectomy.

In the Modern World, there has been an aggressive change in the requirements of individuals with respect to the recovery posed by any surgery of any kind. The general thought process has moved on from being willing to accept bed rest and Hospital admission for long periods. With the advent of LASERs and Laparoscopy, surgeries are being performed with minimal to no scars and only such methods are having a good reception among the general public.

With regard to CSOM, scarless techniques are difficult and usually they do not give good disease clearance. In some cases where the Tympanic Cleft is healthy and the perforation is limited to one or a little more than one quadrant, endoscopic scarless Myringoplasty is no doubt very much possible for closure.

This method of Myringoplasty can be performed by Chemical Cauterization and is commonly referred to as “Medical Myringoplasty” or “Office based Myringoplasty” [2,3].

The advantages of this method are:

- Scarless approach without incision and sutures.
- Nil hospital admission, dressing and bandages.
- No necessity for General Anaesthesia.
- Minimal follow-up in the post-operative period.
- Minimal to nil blood loss.

All cases are performed in our setup under Local Anaesthesia and on out-patient basis. Patient is asked to lay down supine with head turned to the opposite side. Using a zero degree endoscope and camera, the Tympanic Membrane is visualized and the margins of the perforation are noted. The Anaesthetic agent used is a combination of 4 ml of 2% Lignocaine with 1 ml of 1:40000 Adrenaline. A maximum of 5 ml is used for infiltration along all the four quadrants throughout the procedure. About 2 ml of 4% Lignocaine is used as topical Anaesthetic and left for 5 minutes to cause action. The Ear Canal is then suctioned completely and made devoid of pus, wax and debris. Based on availability, either 40% of Trichloroacetic Acid (TCA) or 10% Silver Nitrate (AgNO_3) is taken on a sterile Jobson's Ear Probe by dipping it along the tip and slowly introduced to the edges of the perforation. It is then rotated 360° along the margin and some of it is also used to cauterize the medial surface of the perforation. Care is taken not to injure the middle ear structures and the external auditory canal. The procedure is repeated till a whitish patch is seen along the margin which indicated blanching. Absorbable Gelatin Sponge (Gelfoam) is shaped out neatly in the

form of a dumbbell and one edge is passed via the perforation and into the middle ear. The piece is snugly fitted into the perforation. About 0.5 ml of the patient's own venous blood is freshly drawn on table and dropped into the ear canal to protect the area from the outer air. The rest of the ear canal is packed with smaller pieces of Gelfoam soaked in Framycetin cream. The patient is observed for 30 minutes and sent home. Follow-up is conducted once a week for 4 weeks. Any residual Gelfoam/Clot is slowly removed after 2 weeks. A course of oral antibiotics is started along with nasal and oral decongestants.

This procedure, as discussed above, is completely non-traumatic and has yielded excellent results. Both TCA and AgNO₃ are inexpensive and easy to store. It is completely safe and can be undertaken as an office procedure. The patient only needs to be in the Hospital/Clinic setup for 2 hours which makes it very much favorable and acceptable in the modern age and society.

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