



Otoendoscopy

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Abstract:

This article dwells in depth about the role of otoendoscopy¹ in diagnosis of middle ear disorders. Middle ear diseases were diagnosed by performing routine otomicroscopic examination using an operating microscope. With the advent of nasal endoscopes, and the steep learning curve of one handed manipulation of surgical instruments conquered, otolaryngologists have started using endoscopes to diagnose middle ear disorders. This article discusses the authors experience in otoendoscopy.

Introduction:

Advent of endoscopes have revolutionized diagnosis and treatment of various disorders. Otology is no exception to it. Otoendoscopes are rigid endoscopes which have been used for diagnostic purposes in the field of otology. This procedure of otoendoscopy was first described by Mer et al². Commonly used otoendoscopes include:

1. 1.7 mm 0 degree otoendoscope
2. 1.7 mm 30 degrees otoendoscope

Author prefers to use the nasal endoscope itself for otological diagnostic purposes. The advantages being the obvious optimization of instrument usage.

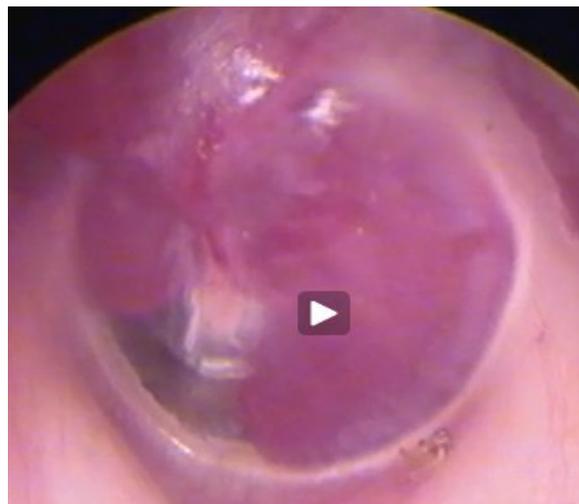
Advantages of using rigid endoscopes to perform otological examinations:

1. The entire ear drum can be clearly visualized with minimal manipulation

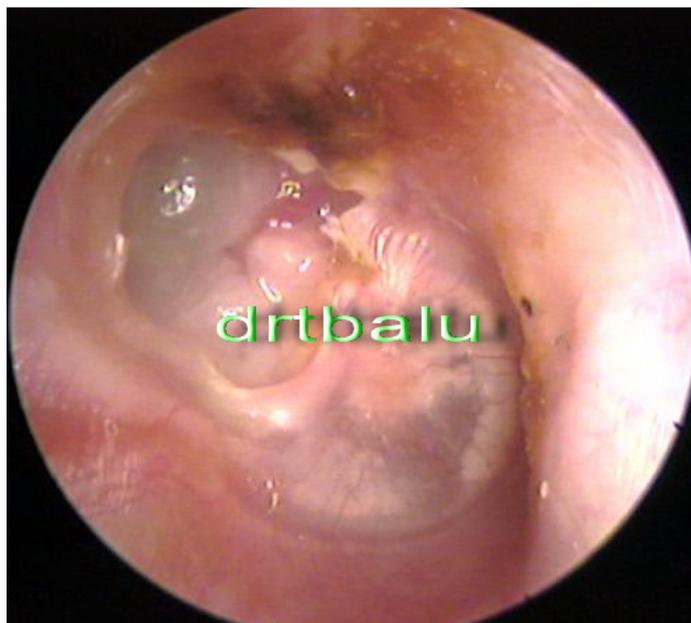
2. The image produced is of excellent resolution hence photographing these images provide excellent results ⁴.
3. Fluid levels in middle ear cavity due to otitis media with effusion is clearly seen in otoendoscopy than in routine otoscopy ³.
4. Every nook and corner of external auditory canal and middle ear cavity if tympanic membrane perforation is present can easily be examined with minimal manipulation of the endoscope.
5. It is easy to clear the debris from the external auditory canal under visualization with an otoendoscope.



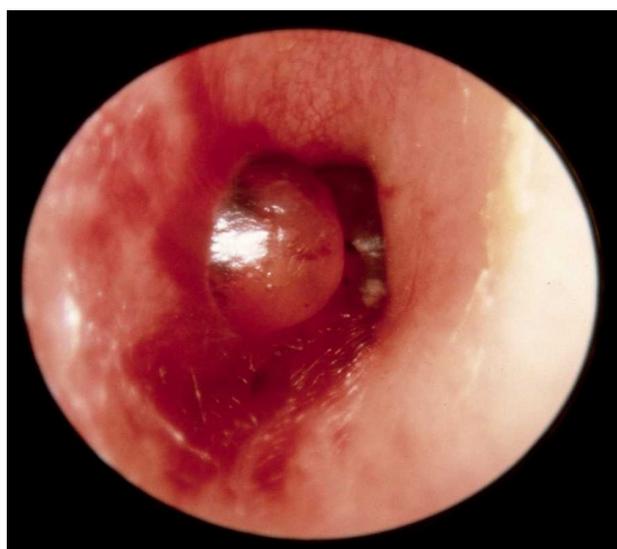
Otoendoscopy showing retracted ear drum draped around the middle ear structures



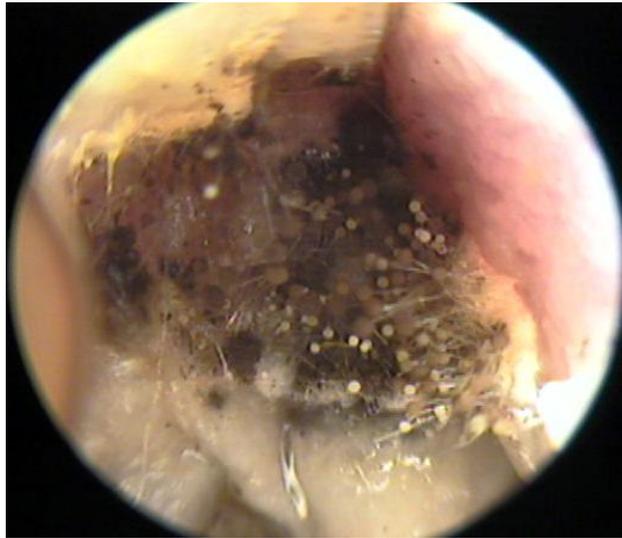
Otoendoscopic view of glomus tympanicum



Otoendoscopic picture of attic perforation



Otoendoscopic picture of acute otitis media



Otoendoscopic picture showing otomycosis



Otoendoscopic view of attic cholesteatoma

According to the author's experience the following minor procedures can be easily performed using otoendoscopy:

1. Removal of epithelial debris from external auditory canal
2. Removal of cerumen
3. Removal of otomycotic flakes
4. Removal of maggots / foreign bodies
5. Removal of aural polyp
6. Suction clearance

All these procedures can be commonly performed as out patient / day care procedures.

Common Outpatient otoendoscopic procedures performed in our Institution during 2010

Total Otoendoscopic procedures: 2400
Diagnostic otoendoscopy – 1064
Removal of debris / wax from external canal – 460
Suction clearance – 320
Foreign body removal – 56
Removal of otomycosis – 500

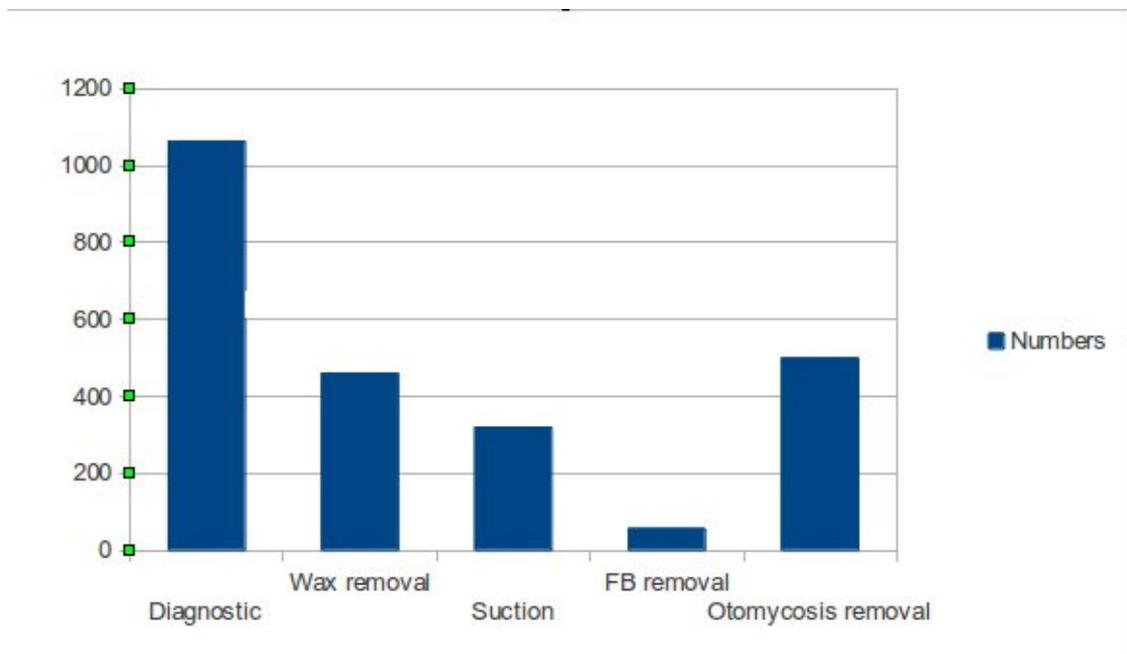


Table showing various out patient procedures performed with otoendoscopy in the author's hospital

References:

1. Silverstein H. Minimally invasive otologic course. Ear Research Foundation Saxosota (Florida) 2001.
2. Mer SB, Derbyshrin AJ, Brushenko A and Pontarelli DA. fiberoptic endoscopes for examining the middle ear. Arch Otolaryngol 1967: 85 387-93.
3. Eichner H. Eline mother and baby scope optic otomicroscopy and middle ear Endoscopy. Laryngol Rhino (Stuttg.) 1978: 57 872-76
4. Deguine C. Otoscopic photography. In David A Moffat(ed) Recent Advances in Otolaryngology. 1st Ind. Edition. Churchill Livingstone. New Delhi 1996 : 19-26.