



# The endoscopic management of epitympanic cholesteatoma

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North Bristol NHS Trust **NHS**

## The idea

- Why are all pictures of ears taken with an endoscope not a microscope?

# Current practice

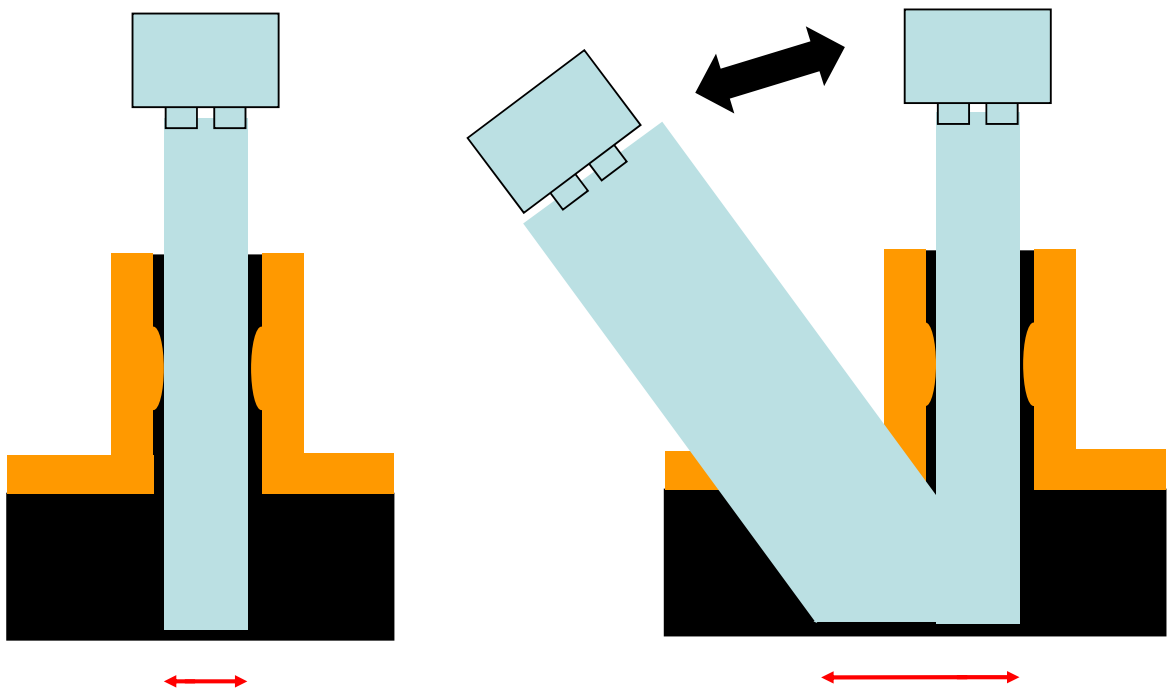
- Microscopic approach

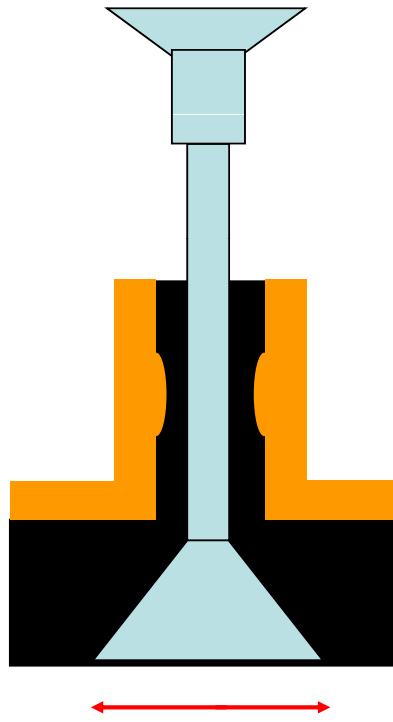


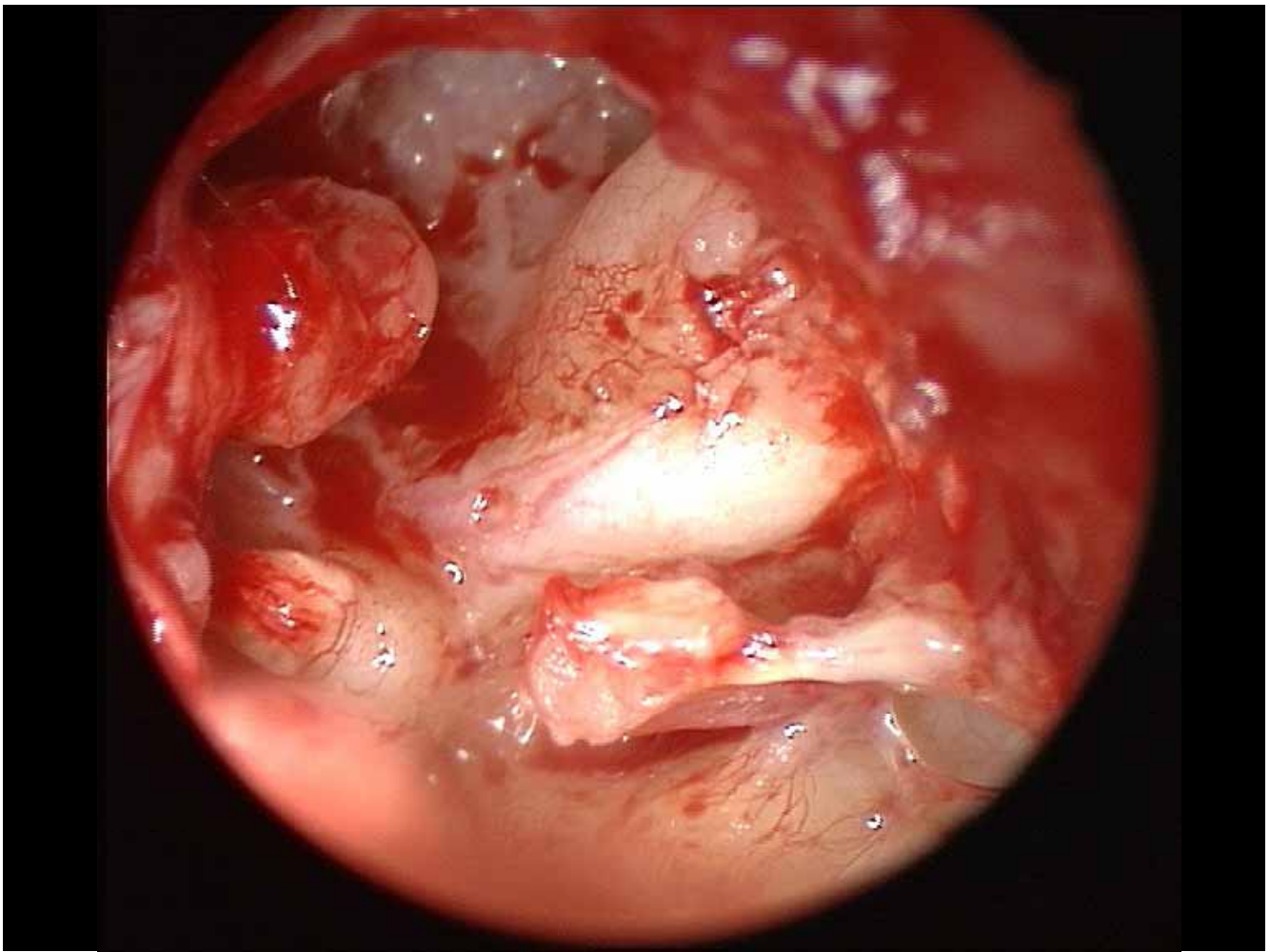
View











But...

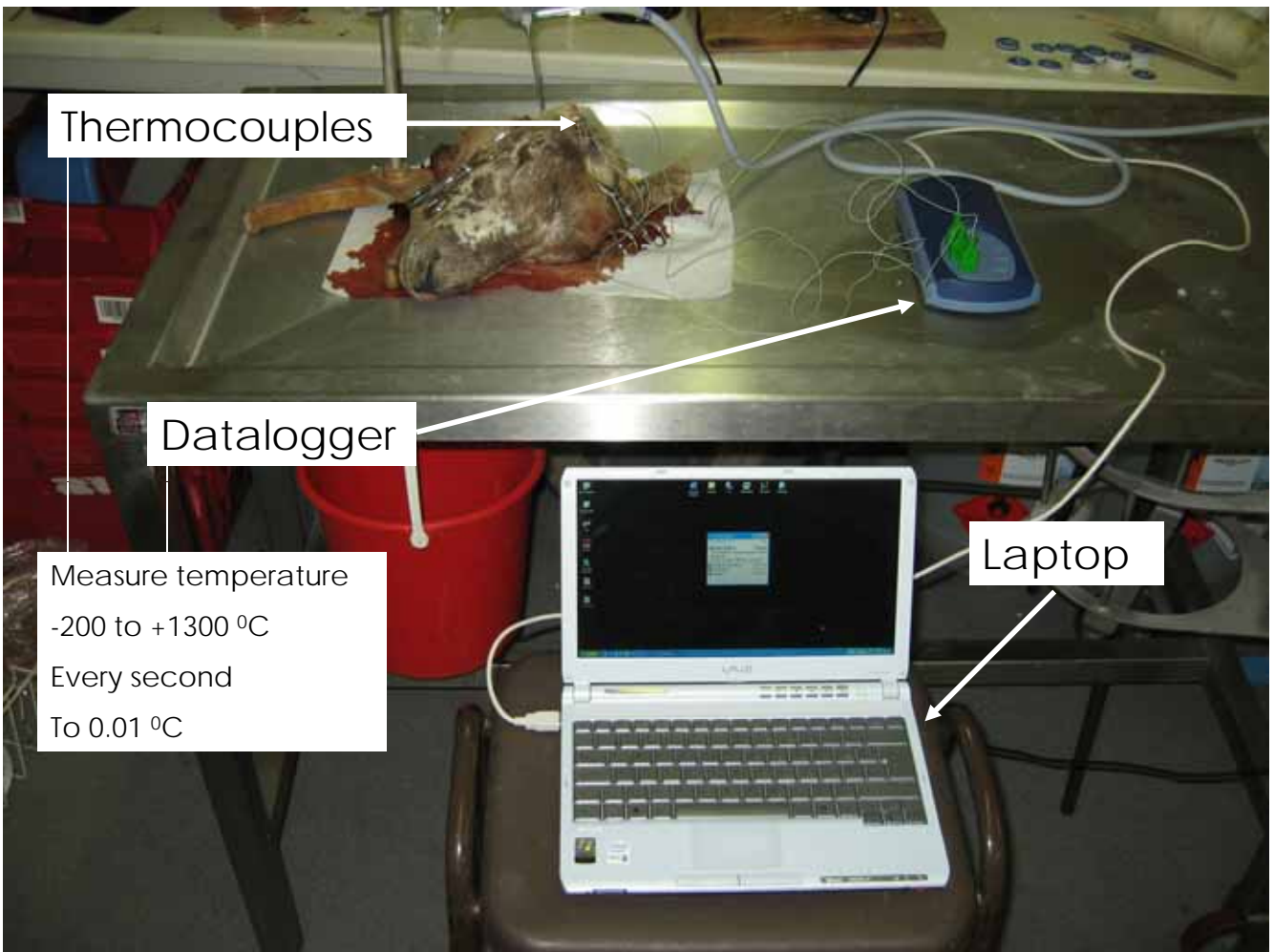
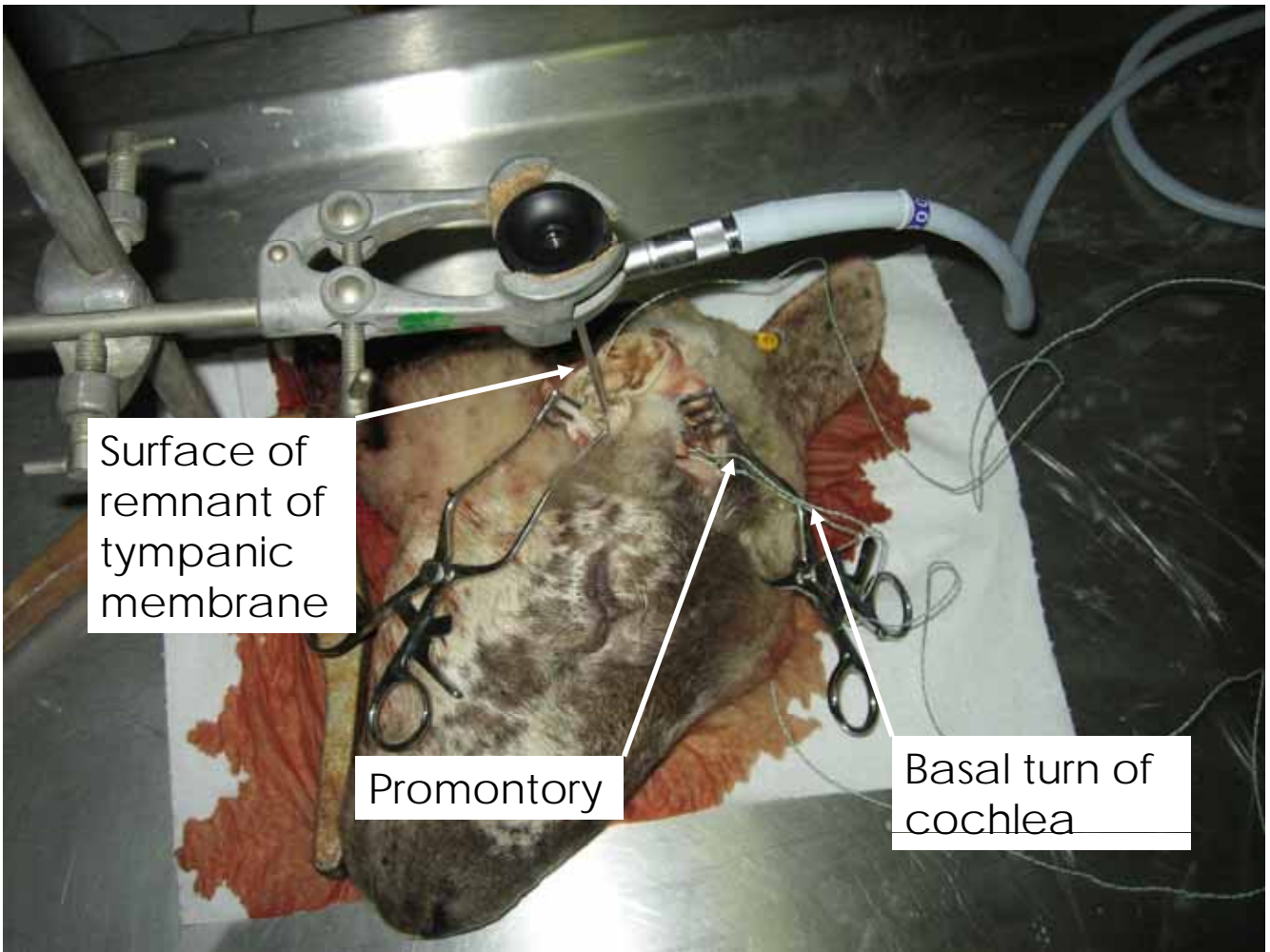
- 2D rather than 3D
- Largely one handed technique
- Requires practice
- Gentle learning curve

# History



- 1) Tarabichi M. Endoscopic management of acquired cholesteatoma. *Am J Otol* 1997; 18(5):544-549.
- 2) Tarabichi M. Endoscopic middle ear surgery. *Ann Otol Rhinol Laryngol* 1999; 108(1):39-46.
- 3) Tarabichi M. Endoscopic management of cholesteatoma: long-term results. *Otolaryngol Head Neck Surg* 2000; 122(6):874-881.
- 4) Tarabichi M. Endoscopic management of limited attic cholesteatoma. *Laryngoscope* 2004; 114(7):1157-1162.







# Methods

Endoscopes inserted into EAM to a mark 5mm from TM

Recording started

30 seconds later – light switched on

Light switched off after 25 mins

Further recording for 4.5 mins

3 recordings averaged

4mm endoscope inserted into middle ear

Recording started

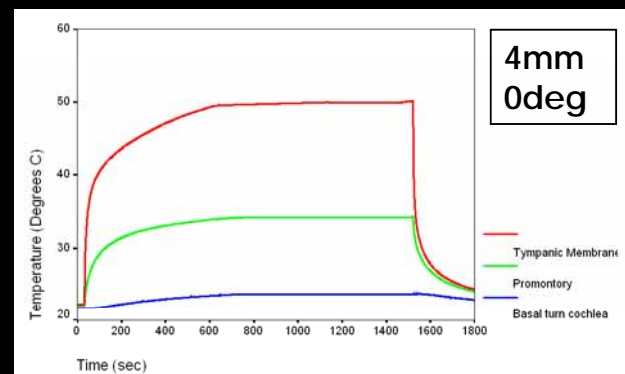
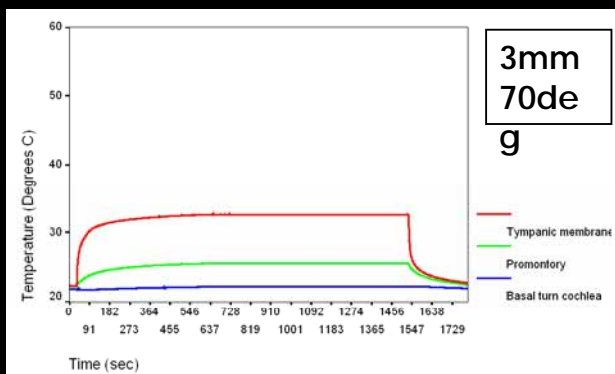
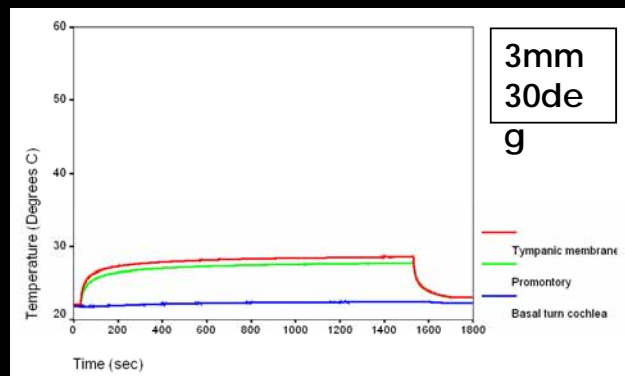
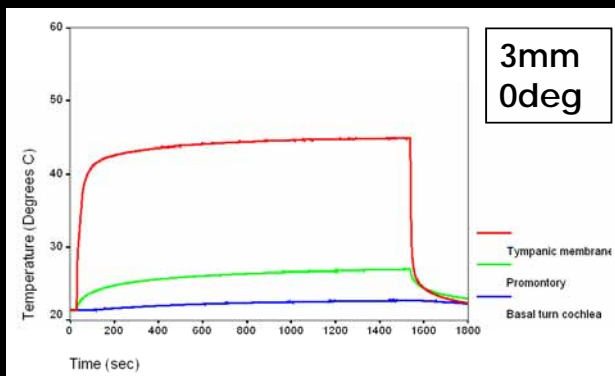
30 seconds later – light switched on

Light switched off after 25 mins

Further recording for 4.5 mins

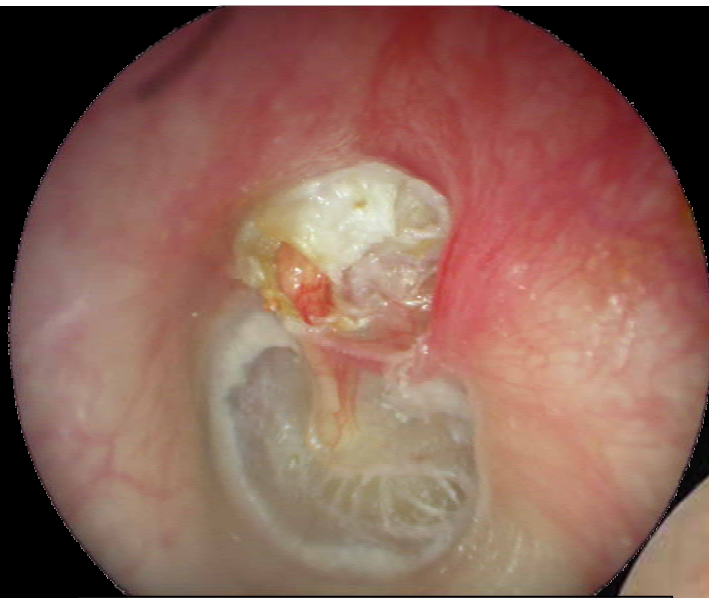
3 recordings averaged

# Results - all



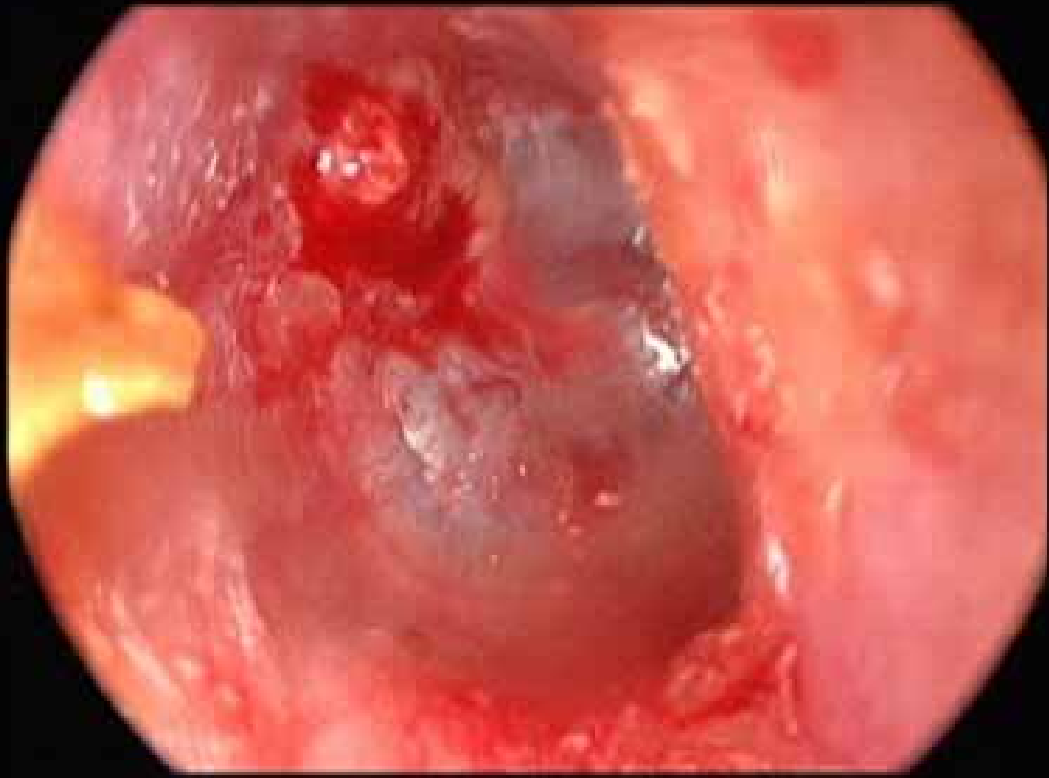
# Getting started - training issues

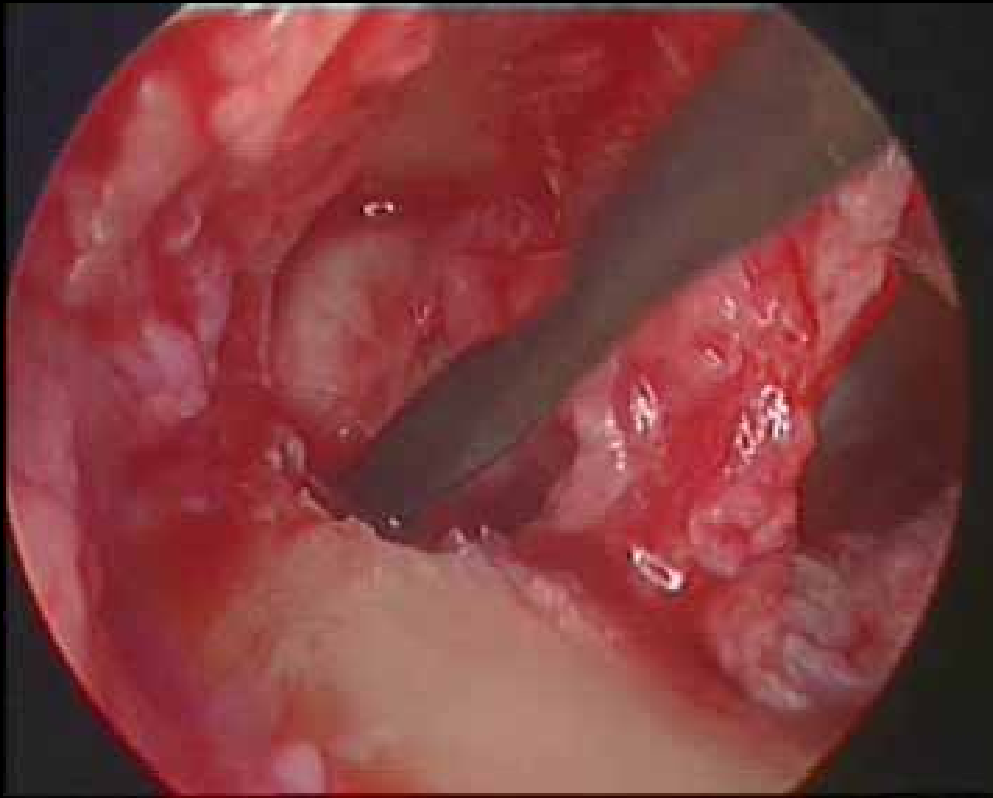
- Haptic feedback more important than when using a microscope
- Endoscope in the hands of an Otologist
- Different 3D requirements
- Nowhere to hide



Cholesteatoma







# International Working Group

[www.endoscopicearsurgery.com](http://www.endoscopicearsurgery.com)



# Conclusions

- Full field of view
- Look around corners
- Minimally invasive
- Less removal of bone
- Almost no scar