Learning Objectives:

- Review the indications for endoscopic middle ear surgery.
- Compare the short-term outcomes of endoscopic with conventional middle ear surgery.
- Discuss the application of endoscopic techniques within the UK patient population.

Introduction: Totally Endoscopic Ear Surgery (TEES) and Endoscopic Assisted Microsurgery (EAMS) is still a new concept. Endoscopic techniques for the treatment of pathological conditions of the middle ear have been gradually introduced since 1990. However, relatively few centres in the UK are performing them. Advantages over standard techniques include better visualisation of difficult to reach areas, such as the sinus tympani, and limited external incisions[1,2].

Here we report our short-term outcomes for endoscopic middle ear surgery.

Methods: We performed a prospective review of the first 97 consecutive patients undergoing TEES or EAMS in Monklands District General Hospital undertaken by one operator. Outcomes assessed were: tympanic membrane healing, audiological data and complications.

Results: 23 patients underwent EAMS while 74 had TEES. Operations performed included: cholesteatoma surgery, stapedectomy and myringoplasty. We had no reported cases of dead ear or permanent facial nerve palsy. Average air-bone gap following stapedectomy was 6.49 dB. The tympanic membrane healing rate was 87%.

Conclusion: Our results confirm that endoscopic middle ear surgery is safe with short-term outcomes that are comparable with conventional surgery. We feel that it offers and exciting way of improving the management of middle ear pathology through improved access and visualisation. This in turn has implications for teaching and training.

References

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Free Papers (F862)

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Endoscopic Stapes Surgery: Our Experience

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Learning Objectives: To report our experience with the use of endoscopes in stapes surgery in terms of complication rates and hearing outcomes.

Introduction: Endoscopic ear surgery is a rapidly developing area in otology. The endoscope can provide a unique view of middle ear anatomy and is being utilised to facilitate ever more surgical procedures. We aim to report our experience with use of the endoscope in stapedectomy.

Methods: Data was collected prospectively for all stapectomy operations carried out in NHS Lanarkshire by a single surgeon from August 2009 to December 2015, using the Common Otology Audit, a UK wide data collection tool. Outcome measures were pure tone audiometry pre- and post-operatively at 0 and 3 months; and complication rates at 3 month follow up.

Results: 83 operations were carried out for otosclerosis with stapes fixation during this time period. 78 of these were primary operations, and 5 were revision procedures. 27 of these were carried out endoscopically or endoscopic-assisted, and 56 were performed using an operating microscope. Average total pre-operative air-bone gap was 29 dBHL; 28 dBHL for endoscopic operations; and 29 dBHL for open operations. 70 patients were followed up in clinic at 3 months. Two were lost to follow-up from the endoscopic group and 11 from the open group. Average post-operative air-bone gap was 7.9 dBHL in the open group and 7.6 dBHL in the endoscopic group. 84% of patients achieved reduction in air-bone gap to less than 10dBHL in the open group and 88% in the endsocopic group. 100% of both groups achieved less than 20 dBHL. No patients had a facial nerve palsy, vertigo or complained of taste dysfunction. One patient complained of tinnitus at 3 months from the endoscopic ear surgery group.

Conclusions: Our results demonstrate that the endoscopic approach to ear surgery has comparable outcomes to microscopic approaches, both in respect to our own unit, and to published literature, in terms of hearing gain and complication rates. Our experience suggests that endoscopic approach to ear surgery is safe and effective.

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Free Papers (F862)

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Surgery for cholesteatoma of the facial recess and sinus tympani: retrotympanotomy from anterior, mobilizing and using chorda tympani for guidance - Farrior's principle rediscovered and modified

Presenting Author: **James Loock**

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Learning Objectives: To describe an operation to access the retrotympanum using the operating microscope and removing bone over the facial recess and sinus tympani safely by mobilizing and utilizing the chorda tympani as an indicator of the position of the facial nerve.