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**Useful tips in ear surgery (V767)****ID: 767.2****For the Video Sessions: The MO-meatocanalplasty of the external auditory canal: a modification of the M-meatoplasty to address the superior quadrants of the lateral canal**Presenting Author: **Joost van Dinther**

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**Learning Objectives:** The meatoplasty of the external auditory canal is a frequently performed otologic procedure. Indications include recurrent otitis externa refractory to medical treatment, eczema and/or frequent accumulation of cerumen due to a narrow meatus of the external ear canal. In canal wall down surgery for chronic otitis media it is an essential step to achieve a dry and easily cleanable cavity. Numerous surgical techniques have been described on how to do a meatoplasty. In our department, we used to perform the M-meatoplasty technique, described by Mirck in 1996. This procedure has proven to be easy to perform, adjustable to the individual patient, efficient and aesthetically acceptable. However, in several cases, we found that the M-meatoplasty did not sufficiently enlarge the external ear canal. This is specifically the case in patients where ear canal narrowing was most prominent in the postero- and/or anterosuperior quadrants of the lateral meatus. In this video presentation we teach the “M-Oblique” modification of the M-meatoplasty to adequately address ear canal narrowing in these difficult cases.

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**Free Papers (F772)****ID: 772.1****Comparison of CT vs CT-MRI Fusion Imaging in Assessment of Mastoid Cavity Involvement by Cholesteatoma: Implications for Endoscopic Ear Surgery**Presenting Author: **Alexander Saxby**Alexander Saxby<sup>1</sup>, Laughlin Dawes<sup>2</sup>, Christina Cheng<sup>3</sup>, Samantha Wills<sup>4</sup>, Nicholas Jufas<sup>1</sup>, Jonathan Kong<sup>1</sup>, Nirmal Patel<sup>1</sup>, Simon Greenberg<sup>3</sup>*<sup>1</sup>Sydney Endoscopic Ear Surgery Research Group, <sup>2</sup>Spectrum Medical Imaging, Sydney, Australia, <sup>3</sup>Liverpool Hospital, Sydney, Australia, <sup>4</sup>Royal Prince Alfred Hospital, Sydney, Australia***Learning Objectives:**

- Pre-operative CT scan for cholesteatoma overestimates mastoid involvement.
- CT-MRI Fusion imaging permits definition of cholesteatoma matrix from sequestered fluid, potentially avoiding an unnecessary mastoidectomy.

**Introduction:** Pre-operative assessment of cholesteatoma traditionally involves non-contrast temporal bone CT imaging. This can demonstrate opacification of the mastoid cavity but does not define the boundary between cholesteatoma and sequestered fluid. Non-EPI DWI MRI sequences identify the presence of cholesteatoma but do not allow precise anatomical localisation. Fusion of the two images permits estimation of the cholesteatoma/fluid interface. Minimally invasive ear surgery techniques benefit from accurate evaluation of mastoid penetration.

**Methods:** We retrospectively assessed 6 years of CT-MRI Fusion imaging for cholesteatoma. We included any primary pre-operative cholesteatoma which had both plain CT and CT-MRI Fusion imaging. Two reviewers assessed the scans independently, in a randomized blinded fashion to determine cholesteatoma extension into the mastoid for each imaging modality.

**Results:** 58 cases met inclusion criteria. Plain CT imaging demonstrated mastoid involvement in 42 of these cases, thus demonstrating 28% had cholesteatoma which did not reach the mastoid cavity, predicting feasibility for total endoscopic removal. CT-MRI Fusion imaging increased this to 60%. Information from CT-MRI Fusion changed pre-operative evaluation of whether open mastoidectomy was necessary in 45% of cases. Overall, the extent of cholesteatoma involvement in the mastoid was overestimated by plain CT in 47% of cases.