

Introduction: Soft tissue preservation using a hydroxyapatite-coated abutment may lead to a reduction in complications in percutaneous bone conduction hearing implant surgery. In this open multi-center, randomized(1:1), controlled clinical trial, eligible subjects were assigned to receive the conventional intervention, a titanium abutment (Cochlear™ Baha® BA300) with soft tissue reduction, or a new intervention, a hydroxyapatite-coated abutment(BA400) with soft tissue preservation. The primary outcome was a combined endpoint which included the secondary outcome measures pain, numbness, peri-abutment dermatitis and skin thickening/overgrowth.

Results: 106 subjects were randomized. The difference between the groups after one year of follow-up as measured by the primary efficacy variable was not statistically significant($p = 0.12$) in the ITT population($n = 103$), but was statistically significant($p = 0.03$) in the Per-protocol population($n = 96$). It showed an advantage for the test group, with over twice as many subjects(29%) with none of these important medical events during the first year compared to the control group(13%). Secondary outcome measures, such as surgical time (15 vs. 25 minutes, $p < 0.01$), numbness(90% vs. 69% of subjects experienced no numbness at one year, $p < 0.01$), neuropathic pain (mean score at 3 months, 1.06 ± 0.25 vs. 1.70 ± 1.53 , $p = 0.015$) and the overall opinion of the esthetic outcome were favourable for the test group. Five abutments with tissue overgrowth had to be changed in the control group versus one in the test group. No significant differences existed in the occurrence of peri-abutment dermatitis(Holgers index). One implant extrusion was recorded in each group.

Conclusion: Soft tissue preservation with a hydroxyapatite-coated abutment leads to a statistically significant and clinically meaningful reduction in numbness, neuropathic pain and surgical time, and improves cosmetic outcomes in comparison to soft tissue reduction surgery with a titanium abutment.

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Free Papers (F762)

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Findings on 7000 magnetic resonance scans of the internal auditory meatus: To scan or not to scan?

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Learning Objectives: MRI IAM is a useful tool for the Neurotologist to clarify related symptoms or reassure the patient. Although the VS pick up rate is low, the potential risks of misdiagnosis justify the wide utilisation, as do the high rates of incidental and abnormal findings.

Introduction: Vestibular schwannomas (VS) account for up to 10% of intracranial neoplasms. Magnetic resonance imaging (MRI) of the internal auditory meatus (IAM) has been established as the gold standard in VS diagnosis. Numerous guidelines (Sunderland, Charing Cross and

Oxford) advise when to scan, with reported positive results ranging from 0.5% - 4.3%. We reviewed results of MRI IAM for a catchment area of two million over a three year-period.

Methods: Registration with the Caldicott guardian was made and permission given to obtain audit data from the radiology. The information and statistics team provided the MRI IAM episodes. We entered the report for each episode from the electronic patient record. This was coded to six separate outcomes. Normal, VS, Cholesteatoma, Incidental, Other and Incomplete.

Results: A total of 6978 exams were performed. 96% involved adult (>16 years) patients; 55% female and 45% male. In total, 66.5% ($n = 4640$) were reported as normal, a further 15.7% ($n = 1097$) had incidental findings. The number of new diagnosis of VS was 99 (1.6%), while 3.3% ($n = 231$) scans were incomplete. Additionally, 1.2% ($n = 89$) diffusion weighted scans for investigation of cholesteatoma and 10% ($n = 726$) surveillance of known VS were identified. Twenty-five scans were requested for surveillance of other disease such as facial nerve, external and middle ear lesions. We also noted inappropriate requests for morbidly obese or extremely claustrophobic patients.

Conclusions: This is one of the largest reported databases, demonstrating a VS pick up rate of 1.6%. With 66.5% scans reported as normal, the high incidence of abnormal findings, either incidental or not (33.5%) justifies the usage of MRI IAM.

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Congenital Aural Stenosis: Clinical Features and Long-term Outcomes

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Learning Objectives: There was no significant difference among different diameter of stenotic EAC for cholesteatoma formation, and stenosis of EAC (>4 mm) with cholesteatoma may be a special state of EAC, we named it as blockage of EAC.

Introduction: The aim of the present study was to evaluate the clinical features and long-term outcomes of CAS comprehensively.

Methods: It was a retrospective review of patients who underwent meatoplasty for CAS at a tertiary referral hospital, from April 2008 to August 2015. A structured form was used to obtain data from patients' anamneses, PTA, HRCT of the temporal bones, operation notes and videos, pathology reports and postoperative follow-up records.

Results: A total of 246 meatoplasty were performed on 232 patients in our study. There was no significant difference among different age groups for cholesteatoma formation,