from 2010 to 2013 by a single surgeon with 2.5 years follow-up. Patient demographics, intraoperative disease induced changes and postoperative outcomes were analyzed.

*Results*: Of the 216 patients, 119 had primary and 73 had secondary cholesteatoma. 24 patients were referred for residual/ recurrent disease and 48 presented with one or more complications. Erosion of sinus plate was seen in 9 and dural plate in 16 cases. Sinodural angle was involved in 28, sinus tympani in 40 and facial recess in 45 cases. Facial nerve was dehiscent in 53 cases. All patients underwent canal wall down mastoidectomy as a rule. Mastoid obliteration was done in 40 cases. Hearing mechanism was reconstructed by tympanoplasty – type 3 (116), type 4 (38) and type 2 using autologous incus (32). 26 patients underwent staged procedure and 4 required cul-de-sac closure. Dry cavity was achieved by an average of 1.75 months. Recurrence was seen in 1 patient.

*Conclusion*: Complete eradication of disease by adequate exposure, proper saucerisation of mastoid cavity, adequate lowering of the facial ridge and wide meatoplasty are four main principles for a dry cavity. Obliteration in select cases is required to create an optimum sized cavity. Hearing improvement, though secondary, is vital and should be attempted if eustachian tube function allows. A good follow-up is always essential.

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S162

## Successful early loading of a BAHA (Bone Anchored Hearing Aid) in a patient with learning difficulties

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*Learning Objectives*: Early loading of the BAHA abutment is feasible, safe and provides evidence for a change of clinical practice to ever shorter loading times.

*Introduction*: BAHA placement is routinely undertaken as a single stage process. Loading is performed at an interval period – usually six days – to allow for osseointegration. We report the successful early loading of a BAHA, at four hours post-operatively, undertaken as a result of hearing loss on a background of learning difficulties in a paediatric patient with Down's syndrome and autism. Satisfactory short and long-term outcomes are reported.

Methods: Case Report.

*Results*: A 16-year-old male with Down's syndrome and autism underwent a left BAHA placement. A conventional hearing aid had not been tolerated by the patient. Since the age of 9, a soft-band device had been trialled and had been well tolerated.

The procedure involved single-stage placement of a 4 mm implant with 10 mm abutment, performed via the FAST technique, using a curvilinear incision.

Post-operatively the patient was agitated and it was elected to load the abutment early, at four hours, to overcome difficulties in communication.

The initial intra-operative resonance frequency analysis (RFA) stability measurement was 49 (implant stability quotient (ISQ) 65 units after correction for abutment length). Medium and long-term follow-up at 12 months confirmed maintenance of implant stability by maintained ISQ values. No local complications occurred.

*Conclusions*: A successful outcome following early loading of the BAHA abutment was achieved, and is considered the earliest recorded BAHA loading described in the literature. The procedure is predicated upon the use of real time RFA measurement.

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# Pediatric cholesteatoma surgery : results of cartilage block ossiculoplasty

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*Learning Objectives*: To assess the efficacy and long-term stability of partial ossicular chain reconstruction using autologous cartilage.

*Objective*: To assess the efficacy of partial ossicular chain reconstruction using autologous cartilage.

*Design and setting*: Retrospective study, Tertiary academic children's hospital.

*Patients*: Two hundred forty-eight children (268 ears) underwent partial ossicular chain reconstruction using a shaped block of tragal cartilage interposed between the head of the stapes and an underlay tympanic membrane reconstruction along with tragal cartilage and its perichondrium.

*Main Outcome Measures*: Anatomical and audiologic results were evaluated according to the American Academy of Otolaryngology–Head and Neck Surgery guidelines. X2 Tests and multivariate analysis were used for statistical evaluation.