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ID: IP173**Can the softband BAHA indicate the prospective improvement in hearing with middle ear implants?**Presenting Author: **Rujuta Roplekar**Rujuta Roplekar¹, Spielmann Patrick², Stephen Jones²¹NHS Scotland, ²Department of ENT, Ninewells Hospital and Medical School, NHS Tayside

Learning Objectives: Middle ear implant surgery has a significant role in those who have suffered hearing loss due to cholesteatoma, either through the disease process or as a result of surgical clearance. Pre-operative planning is a key component in patient selection for middle ear implant surgery in hearing impairment. The objective of this study is to assess whether softband B.A.H.A. testing pre-operatively indicates the improvement achieved post-operatively. If so, we propose this is as an additional tool in pre-operative planning.

Method: The pre-operative aided half optimum speech recognition threshold (HOSRT) and post-operative aided results were compared for each ear that had undergone either Bonebridge (BB) or Vibrant SoundBridge (VSB) surgery in our centre. Pearson's correlation coefficient was calculated.

Results: Twenty-three implanted ears' (in twenty-two patients) data was assessed. The mean difference between pre-operative (assessment) and post-op (implanted) HOSRT was 8.27 dB. In 16/22 ears (72%) the difference was Pearson's correlation coefficient was 0.52, confirming moderate correlation.

Conclusion: These preliminary data assessment suggests that a BAHA softband is a potential tool to guide expectation of hearing augmentation outcomes with middle ear implant surgery. This data also suggests that results with the softband are not as good as final results with the implant, indicating patients may be counselled to expect equal, if not better, results with implant.

We propose that use of the BAHA softband has a 'predictive' role for pre-operative simulation of expected results, which is useful for patient selection, counselling and operative planning.

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ID: IP174**Is there a Quality of Life (QOL) benefit from Bonebridge © or Vibrant Soundbridge © implants?**Presenting Author: **Rujuta Roplekar**Rujuta Roplekar¹, Irfan Khan², Patrick Spielmann², Stephen Jones²¹NHS Scotland, ²Department of ENT, Ninewells Hospital and Medical School, NHS Tayside

Learning Objectives: Persistent conductive hearing loss in adults can occur for various reasons. It is a recognised consequence of cholesteatoma, and has a significant quality of life impact. Middle ear implantable hearing devices are a relatively novel aid for conductive hearing loss; the first Vibrant Soundbridge © (VSB) surgery was in 2006 and Bonebridge © (BB) in 2013. The objective benefit of improved hearing thresholds is well documented in the literature. This study assesses the more subjective quality of life (QOL) benefit of middle ear implants.

Method: All patients who have undergone VSB or BB surgery were requested to complete Glasgow Benefit Inventory (GBI) questionnaire after the device had been switched on.

The questionnaires were scored as per the GBI inventory scoring system.

Results: 15 out of 25 patients operated on (25 ears) completed the request, giving a return rate of 60%. Eight patients had Bonebridge © and seven had Vibrant Soundbridge © surgery.

The average calculated GBI total sub-score was 32.4, the average social GBI sub-score was 53.5, physical sub-score average was 57.2, and general sub-score was 70.8.

Conclusions: The authors propose that use of QOL assessment is an important component to be included in post-operative assessment alongside audiology assessment.

This case series has shown good QOL outcomes. The scores are equivalent to or better than published GBI scores for other comparable surgical hearing devices[i]. The benefit of middle ear implants is well supported by a combination of audiological and QOL improvement for patients.

[i] Arunachalam PS, Kilby D, Meikle D, Davison T, et al. (2001). Bone-anchored hearing aid quality of life assessed by Glasgow Benefit Inventory. *Laryngoscope* 111(7): 1260–3

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ID: IP175**Evaluation of the Labyrinthine Operation Function in Ears with Acquired Cholesteatoma**Presenting Author: **Leticia Rosito**Leticia Rosito¹, Bruna Seimetz², Cristiane Affeld², Adriane Teixeira², Francisco Zuma e Maia², Sady Selaimen da Costa²¹Hospital de Clínicas de Porto Alegre,²Universidade Federal do Rio Grande do Sul

Learning Objectives: To evaluate the labyrinthine function of ears with cholesteatoma and observe differences between children and adults.

Introduction: Acquired cholesteatoma is an inflammatory condition of the middle ear that causes hearing loss and otorrhea. In our previous study, we had demonstrated that cholesteatoma may be associated to sensorineural hearing loss.