Treatment included explant and blind sac closure, with re-implantation in 3 cases. One case of extensive cholesteatoma required a subtotal petrosectomy. Of the 8 patients, 4 patients required an average of 3 further procedures (range 2–5) to treat continuing CSOM symptoms. Implant outcomes were as follows: original CI retained and in use, n = 1; bilateral CI and use of contralateral non-affected side, n = 4; re-implantation and use of CI on affected side, n = 3.

Conclusions: CSOM can occur, often several years, following CI. Recognition of symptoms together with prompt treatment may allow retention of the original CI and prevent further complications and multiple procedures. CSOM noted preceding CI should be treated adequately prior to or at the time of implantation and steps taken to prevent the recurrence of disease.

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Free Papers (F742)

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Key factors for developing a Successful UK-Surgical Ear Implant Registry

Presenting Author: **Rishi Mandavia**

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Learning Objectives:

Introduction: Hearing loss has a major social, mental and financial impact worldwide. This impact is set to increase with our ageing population. Industry are targeting this with an increasing range of surgically implanted hearing devices. There is currently no UK registry capturing data on these devices. In the absence of such data it is difficult to reflect on practices and monitor clinical and cost-effectiveness. Establishing such a registry faces several challenges. We aim to identify the requirements for establishing a successful UK-surgical ear implant registry.

Methods: We performed a systematic review adhering to PRISMA recommendations. Articles were included if they described UK-surgical registry design, development, or provided critical analysis of a surgical registry.

Results: 48 studies were included. The major challenges encountered by registries included: poor rates of data completion, difficulty in securing funding and registry maintenance.

Recommendations included: datasets be selected following stakeholder consensus meetings; datasets be flexible and quick to complete; registry participation should be compulsory; the registry should be useful for clinicians and easy to use; data should undergo rigorous processing and cleaning; patients should be involved in registry development and be able to access and input their own data.

Funding sources included industry, participating hospitals, professional societies, and research grants.

Conclusion: This study provides an overview of the key requirements for successful UK-surgical registry development based on previous registry experiences. Our future plans are to conduct stakeholder interviews and patient focus groups to further inform the development of a successful UK-surgical ear implant registry.

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Successful Loading of a Bone Anchored Hearing Implant One Week After Implantation - Stability Measurements and Soft Tissue Reactions

Presenting Author: **Morten Høgsbro**

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Learning Objectives: Potential clinical implications of early loading of a bone anchored hearing implant. How to evaluate stability and soft tissue reactions of a bone anchored hearing implant. Results from a clinical study of early loading of a bone anchored hearing implant.

Objectives: To assess implant stability and safety of loading a bone anchored hearing implant one week after surgery. To evaluate post-operative skin complications of a bone anchored hearing implant abutment coated with hydroxyapatite.

Design: Single centre, prospective cohort study of 25 adults with normal skin and bone quality, approved by danish health authorities.

Intervention: Implantation of the Baha BA400 implant system using a linear incision technique without skin thinning. Abutment lengths of 8 mm,10 mm and 12 mm were used.

Outcome measures: Implant Stability Quotient (ISQ) (primary) and soft tissue evaluation (Holgers grade, skin overgrowth, pain, numbness) (secondary) at 0, 7, 14, 30 days and 3, 6 and 12 months.

Results: 25 patients were included, 23 could be followed up for one year. Mean ISQ was increasing with no sign of adverse influence from the early loading. No implants were lost or clinically unstable. Individual ISQ curves fall in two categories: continually increasing ISQ or increasing ISQ with initial dip. 93.8% of all visits resulted in a Holgers Grade 0 or 1. Skin overgrowth occurred in 2.1% of all visits. Pain was none or mild in 97.9% of all visits. For all visits there was no (95.8%) or mild (4.2%) numbness around the implant. Within the first month of follow-up there was a significantly higher score for the Holgers Grade ($p = 0.005$, Mann-Whitney U-test) and significantly more pain ($p = 0.01$, Mann-