technique, reconciling the long term safety aim with excellent anatomical/hygienic outcome. The long term recurrence rates have dropped significantly in our series, as well as the residual rates. The vast majority of the patients report a dry, selfcleaning and water-resistant ear in the long term. The use of non-EP DW MRI as a screening tool for residual disease has obviated the need for routine second stage surgery and provides long term safety.

For us this solves the old debate of CWU versus CWD techniques in cholesteatoma management. Since 1997 we have completely abandoned the use of CWD techniques for the management of cholesteatoma. The suppression of the paratympanic cell system by complete bony obliteration seems to favourably influence the behaviour of the biologically unstable middle ear and its mucosal lining. The careful reconstruction of a solid bony partition between the mastoid and attic space on the one hand and the ear canal and tympanic cavity on the other hand seems to limit the effect of the pathological biological behaviour of the canal skin.

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Free Papers (F742)

ID: 742.1

External Ear Otalgia treated with Subcutaneous Methylprednisolone Acetate injections – a novel case series

Presenting Author: **Paula Coyle**

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Lister Hospital

Learning Objectives: To show delegates a novel way of treating neuralgic external ear otalgia.

Introduction: Steroids are used in other specialities such as orthopaedics and anaesthetics for pain relief. It is felt that corticosteroids reduce pain by inhibiting prostaglandin synthesis which reduced inflammation and tissue oedema by stopping the reduction in tissue vascular permeability. They have also been shown to reduce spontaneous discharge in an injured nerve with reduced neuropathic pain. Steroids are in all ENT department as we use them regularly to help with other symptoms such as hearing loss and vertigo. We present five cases where steroids were used for neuralgic otalgia of the external ear over a year period in an ENT Clinic in a UK district general hospital.

Method: Usual causes of otalgia which can be varied and sinister had to ruled out with full history taking, examination including otoscopy and flexible nasendoscopy. Any further imaging needed was decided on a case by case basis. Patients were examined by the consultant under the microscope. The location of pain on the pinna or external auditory canal was tested by pressing the areas with the speculum or wax hook. Patients were verbally consented and subcutaneous Methylprednisolone Acetate in the form of Depo-Medrone 40 mg/ml was injected into the area. The patient's notes were reviewed and symptoms pre-procedure and post-procedure reviewed and assessed.

Results: Patients all had an improvement on their pain score. Most needed repeated treatment, but were grateful for the temporary relief.

Conclusion: To our knowledge this treatment has not been used in ENT before for managing otalgia. We have had great success with it with small patient numbers and over a short time period. It is easy, safe and practical in perform in the clinic room. We would conclude that large patient numbers and research is needed to assess the reliability, cost analysis and predictability of this procedure in the short and long term.

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Free Papers (F742)

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Chronic suppurative otitis media in adult cochlear implantation: a review of our experience

Presenting Author: **Nina Mistry**

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Learning Objectives:

- Importance of the prompt treatment of CSOM post-CI.
- Recognition of surgical factors when performing CI to minimise the potential for future CSOM development: avoiding or correcting damage to posterior canal wall and annulus.
- In cases of pre-existing CSOM, steps should be taken to treat the disease and prevent recurrence.

Chronic suppurative otitis media (CSOM), with or without the presence of cholesteatoma, may occur following cochlear implantation. At present, however, there is paucity of published data regarding the incidence and management of CSOM in adult cochlear implant (CI) recipients. Here we describe our experience of treating these patients and discuss important lessons learnt.

Details of all CI recipients who underwent procedures for CSOM from January 2001 to December 2015 were identified. Information regarding the patient's case history, type and timing of the surgical procedure, post-operative complications and CI use were collected.

Results: Eight CI patients with CSOM were identified (1.18% of patients undergoing CI during this period). The mean age at initial CI was 53 years. Two patients were identified as having pre-existing CSOM prior to CI and underwent simultaneous procedures. In the other 6 patients, CSOM developed post-CI with the main symptom being chronic otorrhoea. The mean time interval between CI and CSOM surgery was 5.6 years (range 3–11 years).

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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Free Papers (F742)

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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-