

due to the unlimited availability and the alleged antibacterial, osteoconductive and osteopromotive properties. Here we report on the safety and efficacy of the use of S53P4 as obliteration material in cholesteatoma surgery.

Methods: Retrospective cohort study carried out in a secondary referral center. All patients were treated for cholesteatoma with tympanomastoidectomy and mastoid cavity obliteration using S53P4 granules between 2012 and 2015. Main outcome measures were procedure safety, cholesteatoma recurrence, and functional outcome (hearing levels and incidence of otorrhea).

Results: One hundred eleven patients (111 ears) were included. Mean age was 36 years (range 7–80). Eighteen patients were treated with canal wall up tympanoplasty. Ninety-three patients underwent a canal wall down procedure. Mean follow-up was 12.6 months. No wound infections occurred. Cholesteatoma recurrence was 9% (CWU: 17%, primary CWD: 8%, revision CWD: 0%). A dry ear was achieved in 96% of patients. No cases of perceptible hearing loss were encountered. Preparing and implanting the S53P4 granules was technically feasible.

Conclusions: S53P4 bioactive glass granules are safe and easy to use as a filler material in mastoid obliteration. Obliteration of the mastoid cavity with S53P4 granules resulted in less recurrences as compared to our previous results without obliteration

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Subtotal petrosectomy performed between 2005 and 2015 in a tertiary referral centre in the Netherlands: indications, outcome and follow-up

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Erasmus MC

Learning Objectives: Subtotal petrosectomy is a 'last resort' type of surgery where complex anatomy in pathologic ears makes surgery difficult. In case of cholesteatoma, residual disease remains an issue, but as long as patients lack any complaints, follow-up with diffusion-weighted MRI may be acceptable.

Introduction: In chronic otitis media (COM) (with or without cholesteatoma) a subtotal petrosectomy can be a 'last resort' surgical treatment after multiple prior surgeries. Subtotal petrosectomy can also be used as part of a lateral skull base procedure or as a first stage preparation before cochlear implantation. This study describes the results of subtotal petrosectomies performed in our center between 2005 and 2015, mainly focussed on COM.

Methods: All patients who underwent a subtotal petrosectomy in our centre between 01-01-2005 and 01-03-2015 were included in this retrospective chart review. Patient

characteristics, pre-operative complaints and indications for surgery were noted. The main outcome measure for COM patients was complete eradication of the disease and resolution of otorrhea. Complications and number of necessary revision surgeries were noted.

Results: A total of 56 patients (57 ears) were identified. Indications for subtotal petrosectomy were chronic otitis media (COM) with cholesteatoma (n = 28), COM without cholesteatoma (n = 12), prior to cochlear implantation (n = 4), oncology (n = 7) and 'other' (including 2 cases of liquorrhea) (n = 6). Of all COM cases (n = 40) 30 patients had otorrhea prior to surgery. After surgery otorrhea resolved in all 30 ears. In three out of four revisions residual cholesteatoma was found. Another 5 cases show a lesion with diffusion restriction on diffusion weighted MRI and are followed with sequential MRI's. Reported complications were transient infection (n = 7) and vertigo (n = 6). The median follow-up for all 40 COM cases was 18 months (0–106).

Conclusions: This study gives an insight into the results of subtotal petrosectomy in a tertiary referral centre in the Netherlands. Subtotal petrosectomy in patients with otorrhea resulted in a dry ear in all 30 cases. Residual cholesteatoma was proven in 3 out of 28 cases.

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Mastoid Cavity Obliteration Using BonAlive Bioactive Glass

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Learning Objectives: To review the rationale, technique & outcomes in mastoid cavity obliteration.

Introduction: Canal wall down (CWD) surgery is associated with lower rates of residual/recurrent disease. CWD surgery followed by mastoid cavity obliteration is one potential method of reducing the burden of managing the open cavity. We present our results using BonAlive® Granules for mastoid cavity obliteration.

Methods: Retrospective chart review and telephone survey.

Results: Between 2012–2015 we used this technique in a cohort of 20 patients; 16 male and 4 female. Mean age was 46 (median 47, range 32–67). Mean follow up was 19 months (median 15, range 7–46). Recurrence rate was 5% (1/20) of patients. In this case a small attic pearl was noted and this was managed on an out-patient basis. 10% (2/20) patients reported occasional discharge whereas in the remaining 90% (18/20) the ears were completely dry. We also conducted a telephone survey of patients using the Glasgow Benefit Inventory (GBI) with 18/20 patients responding. Mean GBI score was 63 (median 65, range 49–67). 16/18 patients responding to the GBI survey reported a net benefit from their procedure.