

Abstract of dissertation

Title- A Randomised Control Trial comparing the effectiveness of intratympanic Gentamicin with intratympanic Methylprednisolone in the treatment of patients with unilateral intractable Meniere's disease

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Objective- To compare the effectiveness of intratympanic Gentamicin with intratympanic Methylprednisolone with regards to vertigo control, tinnitus control, hearing and functional score improvement in the treatment of symptoms in patients with unilateral, intractable Meniere's disease with non serviceable hearing

Study design- Randomized prospective parallel group trial

Setting- Tertiary care centre in south India

Subjects and methods- Twenty patients with definite unilateral Meniere's disease with average pure tone threshold more than 50 dB in the affected ear were enrolled between November 2016 and August 2018. Eleven patients were treated with intratympanic buffered Gentamicin (total of 4 injections, 40mg/ml, given on alternate days). Eleven patients were administered intratympanic Methylprednisolone (total of 4 injections, 40mg/ml, given on alternate days). Pure tone audiogram, vertigo episodes,

dizziness handicap inventory, tinnitus handicap inventory and functional scores were compared pre intervention and 3 months post intervention.

Result- In the gentamicin group, of 11 patients, 7 (63.6%) were completely free of vertigo episodes at 3 month follow up. 3 of 11(27.2%) patients in the Methylprednisolone group were vertigo free at follow up. Gentamicin group had better post intervention Dizziness handicap Inventory scores ($p=0.016$) and Functional score ($p=0.019$). The change in hearing in both groups, post intervention was statistically insignificant ($p=0.36$)

Conclusion- In patients with unilateral intractable Meniere's disease with hearing loss $>50\text{dB}$ and with no improvement on medical therapy, 4 doses of 40mg/ml intratympanic Gentamicin results in improvement in total DHI score, DHI functional score, DHI emotional score, Functional level scale, with better vertigo control rate and no significant worsening of hearing.

Keywords: Meniere's disease, intratympanic Gentamicin, intratympanic Methylprednisolone