Operative Outcomes Following Round Window Reinforcement for Superior Canal Dehiscence Syndrome

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ABSTRACT

Objectives: Transcanal round window reinforcement (RWR) is a minimally invasive treatment for superior canal dehiscence syndrome (SCDS). Unlike middle fossa craniotomy (MFC) or transmastoid (TM) approaches, RWR is performed to ameliorate symptoms without directly repairing the dehiscence. We aim to describe subjective and objective operative outcomes in patients who undergo RWR for SCDS.

Study Design
Case Series

Methods
We reviewed our experience with RWR for SCDS from 2002 to 2016. Clinical visits, operative outcomes, VEMP and audiometric testing, and pre and post-operative symptom surveys were reviewed.

Results
Eight patients underwent RWR in nine ears. Five underwent RWR as primary therapy, two following prior MFC or TM repair, and two patients with bilateral SCD underwent RWR as a second stage after contralateral MFC or TM repair. Five of eight patients responded to postoperative questionnaires; all five reported at least some improvement in their primary symptoms. Three patients ultimately elected for MFC or TM repair, with the goal of more complete symptom control. Air conduction pure tone average (PTA; ±SD) after RWR was 15.0 ± 9.7 dB preop and 23.3 ± 17.0 dB postop. Bone conduction PTA was 5.6 ± 12.4 dB preop and 11.9 ± 14.2 dB postop. No major complications were noted.

Discussion
RWR may lead to subjective improvement in primary complaints, despite a minimally invasive approach.

Patients should be counseled that partial improvement of primary symptom is the most likely outcome.

A significant number of patients may elect to proceed to a more definitive TM or MCF repair following a trial of RWR.

Patients with contralateral vestibular hypofunction may be particularly good candidates for RWR.

Careful patient selection, combined with a realistic appraisal of outcomes, is crucial to achieve positive outcomes in SCD surgery.

REFERENCES