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**Title:** A survey examining recent trends in cochlear implant securing techniques

**Purpose:** The purpose of this survey is to examine current methods of securing cochlear implants (CIs) as it relates to surgeon experience and patient population, with an emphasis on how individual surgeons’ techniques have evolved over time in the context of improving technology and individual complications.

**Methods**: A brief electronic survey was designed to assess each surgeon’s practice population (adults/children/both), years in practice (0-5, 5-10, or over 10 years), number of implants performed (1-25, 25-100, or over 100), technique of securing (tight pocket vs well with or without retention sutures/holes/screws), number of complications related to migration or infection (zero, 1-5, or over 5), and observations on how their practices have evolved with experience.

**Results:** 56 of 70 (80%) otolaryngologists responded to the survey, which took an average of 2 minutes to complete. The majority of respondents (80%) performed CIs on both children and adults, with 14% reporting adults only and 6% on children only. Most (75%) have been practicing for 10+ years and have performed over 100 implants. Across all experience levels, there was no statistically significant difference in operative techniques: 24% use a tight pocket, 33% use a well with no retention sutures, 26% use a well and drill holes for retention sutures, and 25% use a slight modification of these techniques. Of those in practice for less than 10 years, 86% (12/14) drill a well, compared to 66% (28/42) of more experienced surgeons. Of all surgeons who drill wells, 45% (18/40) did not perform any additional securing techniques, 45% (18/40) used retention sutures through bone or periosteum, and 10% (4/40) used resorbable screws in combination with retention sutures. Overall, complications involving device migration, infection, and skin breakdown were reported by 35 (63%) respondents, with 20 (36%) reporting two or more of these events. There was no statistically significant difference in complication rates between techniques, although several respondents commented on changing techniques (from tight pocket to well and vise-versa) due to perceived complication rates.

**Conclusions**: Techniques for securing CIs continue to vary among surgeons. Perceived benefits of a tight pocket technique included shorter operative time and reduction in infection rates, compared to a more secure device, device symmetry, and reduction in skin breakdown in the well drilling cohort. Novel implant designs (thinner devices with options of securing to bone) may facilitate a better consensus among surgeons.