Draining Ears and Tympanostomy Tubes: A Survey of Pediatric Otolaryngologists and Pediatric Emergency Medicine Physicians

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Background: Post-tympanostomy tube otorrhea (AOMT) occurs in 30% of children with tympanostomy tubes. Although the management of acute otorrhea through tympanostomy tubes has become fairly standardized among pediatric otolaryngologists (PENTs), physicians specializing in pediatric emergency medicine (PEMs) have few guidelines to use for management of this condition. Use of evidence-based guidelines can maximize the use of topical antibiotics to the middle ear mucosa and reduce unnecessary use of oral antibiotics.

Objective: The purpose of this survey is to compare management of AOMT by PENTs, who have recommendations published by the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), with PEMs, who do not have such guidelines.

Design/Methods: A 27-question online survey was formulated for the purpose of obtaining information on the care of children who present with AOMT. An initial e-mail was sent out to consecutive PENT and PEM physicians nationwide who were listed in membership directories of their respective subspecialty organizations. Over the next two months, three reminder e-mails were sent to those who did not respond. A print copy of the survey, along with a self-addressed/stamped envelope, was mailed to all non-responders. Our goal was to receive 150 evaluable surveys from each group.

Results: We received 183 responses from PEM and 174 from PENT physicians (66% of each group). Twenty-eight percent of the PEM, versus 80% of PENT, respondents routinely cleaned the ear canal prior to starting ototopical antibiotic drops (p < 0.001), and 7% and 79%, respectively, used suction for aural cleaning (p < 0.001). Oral antibiotics were prescribed by 54% of PEMs versus 9% of PENTs (p< 0.001). Eighty-six percent of PEM and 99% of PENT respondents prescribed ototopical antibiotics, preferably fluoroquinolone/steroid ear drops (p< 0.001).

Conclusions: This study on AOMT management highlights an opportunity for PEMs to reduce the use of oral (systemic) antibiotics, and thereby decrease the threat of antibacterial resistance. Ototopical fluoroquinolone/steroid drops should be first-line treatment; they are non-ototoxic compared to aminoglycosides and have a high cure rate without significant systemic absorption. To improve the efficacy of ototopical therapy, cleaning the ear canal with aural suction and not dry mopping of the ear should be practiced by PEMs.