

Chronic Post-Tympanostomy Tube Otorrhea: Stepwise Management and Review of The Literature.
Drew Gottman (MD Program), Deborah Gilbert NP, Bethany Thomas NP, Christian Francom MD, Sarah Gitomer MD

Background: Chronic post-tympanostomy tube otorrhea (PTTO) is a difficult to manage problem with limited evidence-based guidance. Here, we present an updated summary of the current literature along with an evidence-based algorithm for management in pediatric populations.

Methods: Review of English-language literature

Results: Current literature on evidence-based management of PTTO supports initial treatment with aural toilet and topical antibiotic-corticosteroid drops over systemic antibiotics. Adjuvant therapy for refractory PTTO can be divided into culture-directed treatments and antiseptics. Mupirocin ointment is effective for MRSA-positive TPPO while topical clotrimazole is effective for fungal TPPO. Antiseptics have limited literature support but include topical acetic acid, hydrogen peroxide, alcohol, and aluminum acetate. Surgical options can be considered for patients with continued drainage. Recent literature suggests that biofilms play an important role in the development of PTTO; therefore, removal of affected tubes is an evidence-based option for refractory PTTO. Additionally, evaluation and treatment of unrecognized causes of eustachian tube dysfunction (including adenoiditis, immunodeficiency, allergies, reflux, or submucous cleft palate) is recommended. Though eustachian tube dilation is a newer consideration for pediatric populations, there is little evidence supporting their use in children and adolescents.

Conclusions: We propose a stepwise approach for treatment of chronic PTTO, beginning with topical antibiotic-steroid drops, then antiseptic drops, then culture-directed treatment, systemic antibiotics for signs of spreading bacterial infection, and finally surgical treatment as indicated. Areas for future research include developing better solvents for biofilms and new treatments for resistant bacterial strains.