

The Efficacy of 2% Acetic Acid in the Treatment of Chronic Suppurative Otitis Media via a Customized Pipette Delivery System

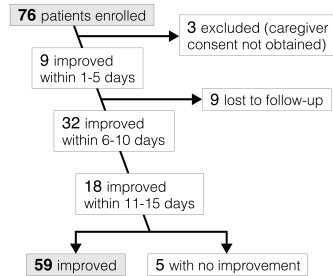
P. Kuatoko, Å. Reimer, T. Pelkonen, K. Riesbeck

Faculty of Medicine, Agostinho Neto University / Hospital Josina Machel, Angola; University of Lund; Translational Medicine, Malmö, Sweden; University of Helsinki, Pediatrics, University Hospital, Finland

Background: A significant proportion of the population in Luanda, Angola, resides in environments characterized by inadequate sanitation and limited access to potable water, contributing to high mortality rates among children under five.

Patients suffering from chronic suppurative otitis media (CSOM) frequently encounter barriers to timely healthcare or present with advanced stages of the disease. In such settings, antiseptics –specifically 2% acetic acid – offer an effective antimicrobial alternative for managing ear infections.

Materials and Methods: A novel pipette (EarClean) was developed to facilitate the safe aspiration of secretions from the external auditory canal and the subsequent irrigation of the ear with a selected therapeutic solution. This prospective study was conducted between March and October 2025 at the Otorhinolaryngology (ORL) Department of the Josina Machel Hospital in Luanda, Angola.



Results: A total of 76 patients were enrolled. In 30 cases, ear discharge had persisted from one month to over a year, with 28 patients presenting with bilateral CSOM.

The clinical procedure involved the aspiration of secretions using a specialized pipette, followed by irrigation with 2% acetic acid via a second pipette; this protocol was repeated two to four times daily until clinical resolution.

Patients were provided with four pipettes for continued home administration. Follow-up was achieved in 64 patients, of whom 59 (92%) showed significant clinical improvement or resolution.

Conclusions: The EarClean pipette, used for combined aspiration and acetic acid irrigation, represents a cost-effective and accessible method to reduce the burden of childhood hearing loss and related complications in under-served areas.

