Conclusions: This novel pattern of threshold elevation in the absence of frank hair cell loss has not been reported previously. The lack of significant changes in ABR latency and amplitude suggests the ototoxic effects are localised to the inner ear without accompanying neurotoxicity. Clinically, this study suggests that rifampicin and clindamycin laden pellets may not be safe to treat OME in vivo.

Learning Objectives: This study demonstrates that middle ear pellets laden with rifampicin and clindamycin cause an ABR threshold elevation and middle ear inflammatory response in guinea pig animal models.

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A comparative study evaluating the utility of EGF, FGF-2, and ofloxacin drops on eardrum regeneration

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Learning Objectives:

Objective: We compared the effects of epidermal growth factor (EGF), fibroblast growth factor-2 (FGF-2), 0.3% (w/v) ofloxacin drops, and conservative observation (only), on the healing of traumatic tympanic membrane perforations (TMPs).

Study design: A prospective, randomised, controlled clinical study.

Setting: A University-affiliated teaching hospital.

Subjects and Methods: All patients had traumatic TMPs covering >25% of the entire tympanic membrane. The closure rates, closure times, and rates of otorrhoea in patients who were treated with EGF, FGF-2, or 0.3% (w/v) ofloxacin drops, and who underwent conservative observation only, were compared.

Results: At the 6-month follow-up, the closure rates did not significantly differ among the groups (P = 0.170). Similarly, pairwise comparisons did not reveal any significant between-group differences (P > 0.0083). The mean closure time differed significantly among the four groups (P < 0.001); pairwise comparisons showed that the mean closure time was significantly longer in the observational group than in the test groups (P < 0.001). However, no significant difference in mean closure time was evident between any two experimental groups (P > 0.0083).

Conclusion: Topical application of EGF, FGF2, and ofloxacin drops accelerated the closure of large human traumatic TMPs. Surprisingly, neither the closure rate nor closure time differed significantly among the three test groups. This results indicate that topical application of ofloxacin drops aids in the healing of traumatic TMPs and should be considered as an alternative treatment option.