INTRODUCTION

History

A high number of patients have had tympanostomy tubes placed. However, the complications associated with the procedure are numerous. One of the most common complications is post-tympanostomy tube otorrhea. Various studies have attempted to evaluate the effectiveness of different antibiotics in the treatment of otorrhea.

Methods

This is a retrospective study onto the tubes during placement. At 1 week, all patients were examined for immediate post-tympanostomy tube otorrhea.

Results

Out of 251 ears with Floxin ear drops single dose instilled at time of surgery, 6 ears (2.4%) developed immediate post tympanostomy tube otorrhea. Out of 308 ears with antibiotic drops, 10 ears (3.2%) developed immediate post tympanostomy tube otorrhea. The difference was not statistically significant (p-value 0.08).

Conclusion

Antibiotic ointment-coated onto the tympanostomy tube at the time of surgery significantly decreases the immediate post-operative complications of otorrhea from 6.1% to 2.4%, which is equivalent to the use of Floxin Otic (2.4%). The cost for Floxin Otic Ear Drops is $112.50 per bottle compared to the cost for Erythromycin Ophthalmic Ointment of only $10.09 per tube.

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METHODS AND MATERIALS

Methods

This is a retrospective study onto the tubes during placement. At 1 week, all patients were examined for immediate post-tympanostomy tube otorrhea.

Antibiotics

Various antibiotics were used for the treatment of otorrhea. Erythromycin ointment and Floxin ear drops were instilled at the time of surgery. For ears with erythromycin ointment, the PTTO incidence rate was 6.14%, 3 affected ears out of 26. 16 of the 399 ears with mucoid effusions had a PTTO rate of 9.45%, or 26 ears out of 275. And the control group, those with no fluid, had an incidence rate of 6.22%, or 24 out of 386.

Results

Erythromycin ointment significantly lowered the incidence rate of PTTO, from 6.14% to 2.27%. The antibiotics not only sanitized the operative contamination. And late PTTO is usually caused by water contamination or upper respiratory tract infection. Chronic PTTO can be the result of anaerobes, staphylococci, yeast, or P aeruginosa. Past antibiotic use can result in resistant organisms; chronic otorrhoeal therapy is often ineffective.

DISCUSSION

The incidence of PTTO is reported to be 3.2% - 5.5% in the literature. 6, 7 This may be due to the use of inadequate antibiotic prophylaxis. Antibiotics are available to treat immediate post-operative otorrhea but their role in reducing the incidence of PTTO is uncertain.

Background Info

In seeming contradiction to the background research, ears with mucoid effusions had a much lower incidence rate than serous or serosanguineous effusions. In order to have as realistic results as possible, no specific group of patient was excluded from the study. The rates of incidence were organized into percentages; the results were analyzed by the chi square test: a statistical probability test that determined if data groups are differentiable.