The effect of apolactoferrin on experimental pneumococcal otitis media

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ABSTRACT

Objective: To find the effect of apolactoferrin administration on the middle and inner ears after experimentally-induced pneumococcal otitis media.

METHODS

Subjects: Middle ear cavities of 10 chinchillas were inoculated bilaterally with 0.5 ml of D39 type pneumococcal suspension (500 CFU/ml). Twenty-four hours later, bullae of 5 of these animals were injected with 0.5 ml of PBS or 0.5 mg/ml apolactoferrin 2 days after inoculation with 0.5cc of 500 CFU S. pneumoniae. MEE indicates middle ear effusion; RWM indicates round window membrane.

RESULTS

A Comparison of pathology in apolactoferrin and PBS treated groups

METHODS CONTINUED

RESULTS CONTINUED

DISCUSSION

Antibiotic resistant bacteria have become an increasing problem. Fifteen to 30% of worldwide have been reported to be antibiotic resistant. As potential therapeutic agents, these innate defenses have antimicrobial activities against the major otitis media pathogens (Haemophilus influenzae and Streptococcus pneumoniae) and can be considered as a promising non-antibiotic approach for the treatment of otitis media and its complications.