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### Abstrak

**Purpose:** We evaluated cultured specimens from silicone tubes removed from patients with congenital nasolacrimal duct obstruction and determined the antibiotic sensitivities of the specimens.

**Methods:** This study included 26 eyes of 22 patients who had received endonasal silicone tube intubation for congenital nasolacrimal duct obstruction. The removed silicone tubes were divided into canaliculus, lacrimal sac, nasolacrimal duct and nasal cavity parts according to insertion state. Then, bacteria and fungus cultures were performed and their antibiotic sensitivity was tested.

**Results:** Bacteria culture rate was 80.8% in the canaliculus and the lacrimal sac, and 88.5% in the lacrimal duct, and the nasal cavity, which was not significantly higher in the nasal cavity than in the nasolacrimal duct and in the nasolacrimal duct than in the lacrimal sac and the canaliculus ( $p$ -value < 0.05). The species of cultured Gram-positive bacteria were in the following order: *Staphylococcus aureus*, *Streptococcus pneumoniae* and coagulase negative staphylococcus. Common species of cultured Gram-negative bacteria were *Pseudomonas* and *Serratia marcescens*. All six species of cultured fungi were *Candida*. Among 12 *Staphylococcus aureus* cultured, eight species showed resistance to methicillin (MRSA). In all patients, the symptoms and the signs of nasolacrimal duct obstruction improved after the tube removal.

**Conclusions:** Bacterial and fungal infection of the silicone tube in patients with congenital nasolacrimal duct obstruction does not appear to affect directly the outcome of silicone tube intubation. Further studies of bacterium and fungi in the nasolacrimal duct before silicone tube intubation are needed for determining the infection causing nasolacrimal duct obstruction J Korean Ophthalmol Soc 2014;55(8): 1121-1125