

# Isolation and Diagnosis of the Conjunctival Normal Flora before and After Cataract Extraction Surgery

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## Abstract

**Background:** The conjunctival flora is opportunistic microorganisms because under certain circumstances they can cause endogenous infections.

**Objective:** This study aimed to diagnose conjunctival flora before and after cataract surgery and their role in post-cataract surgical infections.

**Method:** Specimens from ninety-one patients were collected from the conjunctivas and eyelid margins of ninety-one eyes of ninety-one patients both immediately before and one day after experiencing cataract surgery. These specimens were subjected to microbiological and biochemical tests. Susceptibility of ninety isolates obtained preoperatively was performed toward fifteen antibiotics.

**Results:** *Staphylococcus epidermidis* followed by *Staphylococcus aureus* were the predominant bacteria isolated from the conjunctiva and eyelid

margin of the eyes before and after cataract extraction surgery. Vancomycin followed by ciprofloxacin and amikacin were significantly responsive against conjunctival isolates. In this study two patients suffered from postoperative endophthalmitis with the predominant of *Staphylococcus epidermidis* and *Staphylococcus aureus*.

**Conclusion:** It was predicated that the most causative microbes of post cataract surgical infections were the normal conjunctival flora.

**Keywords:** conjunctival Normal Flora, Endophthalmitis, Ciprofloxacin, Vancomycin, Amikacin.

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## Introduction

The conjunctiva is a thin mucous membrane, which lines the inner surface of the eyelids, as well as the ocular surface of the eye ball. The normal flora is a mixture of organisms regularly found at any anatomical site. The dominant conjunctival normal flora involves mostly *Staphylococcus epidermidis* and certain coryneforms.

Organisms from the patient's conjunctival normal flora may gain entry into the eye at the time of cataract surgery.

These germs are the principal causative agents of postoperative endophthalmitis, which is a serious complication that threatens the visual outcome of cataract surgery. The treatment of postoperative bacterial ocular infections requires coverage for possible pathogens where this could be attained by using a combination of vancomycin, amikacin and ciprofloxacin.

## Materials and Methods

Specimens from Ninety – one patients with cataracts (Forty – three males and forty – eight females) resident in Ibn – Al – Haetham Eye Hospital in Baghdad were collected during the period of November 2001 to August 2002. Their ages ranged from 9 to 92 years. All specimens were obtained by sterile – swabs under supervising the consultant physician in the operating theater. Cultures were

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