

## Spectrum of bacterial conjunctivitis in southern pakistan: 10 year retrospective review of laboratory data

**Ayesha Ahmed**

West Suffolk Hospital, UK

**Background:** Bacterial conjunctivitis contributes largely to ocular morbidity in both developed and developing countries. The spectrum of conjunctivitis is influenced by geographic and climatic factors. One previous report from Pakistan had shown adenoviruses to be predominantly responsible for keratoconjunctivitis, however little is known about the bacterial agents responsible for conjunctivitis. In this study, we report the microbial etiology of bacterial conjunctivitis by performing a 10 year retrospective review of laboratory data.

**Methods:** All conjunctival cultures received at the Aga Khan University Clinical Microbiology Laboratory from 2004 to 2013 with bacterial growth were identified through a laboratory database. Information on patients' demographic characteristics, identification of organisms, and antibiotic susceptibility was obtained from an archived database of laboratory records. Data were entered and analyzed in MS Excel. Results: A total of 1534 conjunctival culture samples were received at the clinical microbiology laboratory during the 10 year study period (2004–2013), of which 375 showed bacterial growth. Staphylococcus aureus was found to be the most common bacterial cause of conjunctivitis. Streptococcus pneumoniae was seen predominantly in children aged 0–14 years. Higher trends of resistance were noticed for trimethoprim sulfamethoxazole and erythromycin.

**Conclusions:** The bacterial profile of ocular surface cultures from patients with conjunctivitis showed prevalence of *S. aureus* in all ages and *S. pneumoniae* in children, with pseudomonal infections common in older age groups, likely associated with the use of contact lenses. Antibiotic susceptibility testing showed high level of resistance to topical antibiotics. Studies designed to address the challenges of antibiotic susceptibility testing against topical antibiotics are needed to inform empiric treatment guidelines in various age groups.

**Keywords:** Antimicrobial resistance, bacterial conjunctivitis, infants, Pakistan, Staphylococcus aureus, Streptococcus pneumoniae.

### Biography

Ayesha Ahmed is currently a trust grade junior doctor at the West Suffolk Hospital, England. She completed her MBBS from the Army Medical College, Pakistan after which she completed her foundation year 1 training from the Aga Khan University Hospital. She went on to work in the Ophthalmology department of Aga Khan Hospital as a Resident Medical Officer before moving to the UK.