

عنوان مقاله:

Bacteria susceptibility and resistance to antibiotics in inflammatory eye diseases

محل انتشار:

پانزدهمین همایش سراسری سم شناسی ایران (سال: 1398)

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خلاصه مقاله:

Introduction: Ocular infections are of particular importance in various diseases of this organ such as endophthalmitis, keratitis, conjunctivitis and other infections caused by pathogens (1, 2). Substances produced such as toxins and metabolites from the activity of microorganisms such as bacteria, fungi and even viruses are related to their defensive or invasive systems (3). These substances cause damage to the tissues and the visual system in the human eye and may in some cases lead to blindness (4). In order to counteract bacterial pathogens, it is important to continuously evaluate the bacterial resistance and susceptibility to antibiotics. In the present study, several disease specimens have been investigated. **Method:** The study obtained based on articles published in the field of pathogens laboratory diagnoses and as well as treatment by physicians, and data collected and were analyzed from databases scientifically valid, such as Scopus, Google Scholar, Science Direct and Springer. **Results:** Studies have shown that the most common pathogenic ocular bacteria in contact lens wearer, neonatal conjunctivitis and endophthalmitis were *Pseudomonas* sp (gram-negative bacteria), *Staphylococcus aureus* and *Staphylococcus epidermidis* (gram-positive bacteria), respectively (2, 5-7). It has been reported that these bacteria are now considered a serious threat causing blindness. Evaluation of different classes of antibiotics relating to the susceptibility and resistance of the bacteria to the antibiotics have shown that *Pseudomonas aeruginosa* has the highest susceptibility to Ciprofloxacin (CP) in contact lens infection wearers (100%). This is while that; serious resistance to the antibiotics Cefazolin (CZ), Chloramphenicol(C), Vancomycin (V) and Trimethoprim (SXT) in this microbial agent were seen (2). *Staphylococcus epidermidis* was shown to have the highest bacterial resistance to Trimethoprim (SXT) in endophthalmitis (7). The results have also shown that *Staphylococcus aureus* is most susceptible to Chloramphenicol(C) in neonatal conjunctivitis (8). **Conclusion:** The importance of bacterial resistance and susceptibility to antibiotics in various eye infections has been the subject of extensive and ongoing research on bacterial agents in eye diseases. Based on this review, following a suitable medicine pattern like above-mentioned paradigm on susceptibility and resistance of bacteria to antibiotics, the drug-dependant toxicities will be lowered in this kind of eye diseases.

کلمات کلیدی:

Endophthalmitis, Neonatal conjunctivitis, Contact lens infection wearers, Antibiotic

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