Bacteriological profile and drug susceptibility patterns in dacryocystitis patients attending Gondar University Teaching Hospital, north-west Ethiopia

Yeshambel Belyhun
University of Gondar, Ethiopia

Background: Bacterial pathogens isolated from dacryocystitis patients are diverse and complex in terms of their distribution, prevalence and antimicrobial susceptibility pattern. The clinical importance of knowing microbial causes of dacryocystitis and pattern of drug resistance has not been reported in northwest Ethiopia. Therefore, this study attempted to identify and define clinical and microbiological characteristics of microbial agents of dacryocystitis and its antibiotic susceptibility patterns.

Methods: A cross sectional study was conducted in January 2012 among dacryocystitis patients attending ophthalmology outpatient department of Gondar University Teaching Hospital. Sociodemographic and clinical data collection, microbiological analysis and antibiotic susceptibility test patterns were done following standard procedures.

Results: From the total of 51 dacryocystitis cases, bacterial origins were isolated among 31(60.8%) cases. The dominant isolates were Coagulase negative Staphylococci (CNS) 9(29.0%), Staphylococcus auerus (S. auerus) 6(19.4%), and Pseudomonas species 3(9.7%). S. pneumoniae, Entrobacter species, K. pnemoniae and H. influenzae were each accounted 6.5% isolation rate. Among the commonly prescribed antimicrobials tested for susceptibility pattern; amoxicillin 38.7%, ciprofloxacin 25.8%, chloramphinicol 25.8%, co-trimoxazole 25.8% and ampicillin 19.4% were resistant to the overall bacterial isolates identified. Only Citrobacter species were sensitive to all antibiotics tested but the rest bacterial isolates were resistant for at least to one, two, three, four and more antibiotics tested. Overall, 9(29.0%) of the bacterial isolates were resistant to only one antibiotics and resistance to two, three and four antibiotics each accounted 5(16.1%) rate.

Conclusion: Though the information derived from this study was very meaningful, further studies encompassing viral, fungal, parasitic and anaerobic bacterial origin are important to better define the spectrum and relative incidence of pathogens causing dacryocystitis. Microbiological analysis and antimicrobial susceptibility pattern is mandatory for the selection of a specific antimicrobial therapy and to the control of further resistance development of bacterial strains.