

## Antibiotic prescribing pattern in ophthalmology outpatient department in a tertiary care hospital

Sir,

Drug utilization research is defined by World Health Organization (WHO) as the marketing, distribution, prescription and use of drugs in a society, with special emphasis on the resulting medical, social and economic consequences. To increase the therapeutic efficacy and minimise the development of resistance drug utilization pattern needs to be evaluated periodically. Inappropriate use of drugs and dosage forms result in potential health hazard to the patients and cause financial burden. To avoid such problems every member of the healthcare system should practise rationally. The five important criteria for rational drug use are accurate diagnosis, proper prescribing, correct dispensing, suitable packing and patient adherence.<sup>[1]</sup>

Studies have been conducted with the aim of improving prescription writing pattern.<sup>[2-4]</sup> In the recent past, the development of new antibiotics has declined<sup>[5]</sup> and the limited available antibiotics cannot compete with the rapid increase of antibiotic resistance. Therefore, it is the need of the hour that we utilise the available antibiotics with much care. The area where a medical professional can play a role is to improve in prescription writing. Hence, this study was designed with the aim to investigate the antibiotics utilization pattern in a tertiary care hospital.

This study was conducted in the outpatient department of Ophthalmology of a tertiary care hospital. Data were collected retrospectively from the medical records of the outpatient who had visited the OPD from 8.30 am to 3.00 pm. The study period was from 12/01/2011 to 19/04/2011. Medical records of 200 patients were audited using a proforma to record the required information. All antibiotics prescribed were recorded

including its dosage form, frequency of administration, duration and indications. Also patients details such as age and sex were also taken into account.

These forms were then used to analyze the average utilization of antibiotics in different formulations, grouping of patients based on age, sex and whether the drugs were prescribed in generic or proprietary names.

During the study period out of 200 OPD patients 28.5% and 31.00% were male and female respectively. Among geriatric patients 14.00% were male and 18.00% were female. In pediatric patients 4% and 4.5% were boys and girls respectively.

The total number of drugs prescribed were 234 in 200 prescriptions. The most commonly prescribed formulation was found to be eye drops (24). Fluoroquinolone (ofloxacin) was the commonly prescribed antibiotic which coincides with findings of earlier studies<sup>[4]</sup>

Of the 200 prescriptions the antibiotics with proper dosage form, frequency and duration mentioned were 92%, 90.5% and 74.5% respectively. Duration was not mentioned in 25.5%, frequency in 9.5% and dosage form in 8%. Drugs were prescribed by generic names in 11.96% and brand names in 88.03%. Similar findings were reported by Yasmeen *et al.*<sup>[4]</sup>

In this study, the antibiotics were commonly prescribed for postoperative complaints followed by viral conjunctivitis, swelling of the eye, foreign body, injuries and iritis. Prescribing of antibiotics was rightly indicated according to the diagnosis except for viral conjunctivitis whose treatment is nonspecific, but here we presume that antibiotics were prescribed to prevent secondary infection. One prescription with a diagnosis of orbital cellulitis was irrationally prescribed with ciprofloxacin which is not an indicated antibiotic for the same diagnosis.<sup>[6]</sup>

The common prescription writing errors were minimum and there was no evidence of polypharmacy. Errors of omission and commission if correctly dealt with in prescription writing the outcome of therapy can be improved and also reduce the development of antibiotic resistance. Prescriptions of generic drugs could facilitate cheaper treatment for patients. Periodical auditing of the prescriptions will help to measure the impact of intervention.

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