



## Need for a standardized antibiotic prophylaxis in keratoplasty

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### To the Editor:

Postoperative endophthalmitis is a rare but potentially visually devastating complication after keratoplasty, ranging from 0.11 to 1.05% [1]. A large number of recently published studies have analysed antibiotic protocols in order to decrease endophthalmitis rates after cataract surgery [2]. In fact, the European Society of Cataract & Refractive Surgeons performed in 2007 the only prospective, multicentre and randomized clinical trial regarding postoperative endophthalmitis after cataract surgery to date [2]. The study showed that intracameral cefuroxime decreases the incidence of postoperative endophthalmitis and its use is being increasingly adopted as routine practice in many countries [2]. However, we have not found in the literature any standardized protocols regarding the prevention of endophthalmitis after keratoplasty.

Postoperative topical antibiotic use is also near universal and retrospective studies suggest that endophthalmitis rates are lower with its use in comparison with those from historical controls [3]. Subconjunctival injections of antibiotics have a long history of widespread international use and two large retrospective studies have identified its use as highly effective in lowering the incidence of postoperative endophthalmitis [3].

The use of preoperative topical antibiotics remains popular among surgeons, particularly in the USA, although convincing evidence regarding its efficacy of the same is unavailable [3]. Moreover, the present prophylactic practices about oral antibiotic used pre and postoperatively have a questionable efficacy too. A recent investigation [4] showed that topically administered 0.5% moxifloxacin could achieve relatively higher aqueous concentrations as compared with the oral route, thus concluding that the role of oral moxifloxacin in combating postoperative endophthalmitis was uncertain.

Whereas the use of pre and postoperative topical antibiotics after keratoplasty is widely accepted [5], there is a lack of description about the use of intraoperative antibiotics in the literature. Albeit it is known that some surgeons routinely use subconjunctival and/or intracameral antibiotics at the end of the keratoplasty procedure, this practice seems to depend more on the traditions of a particular school and personal opinions than on protocolized studies.

There is large evidence that routine administration of intracameral antibiotics decreases the risk of endophthalmitis following cataract surgery. Thus, being most keratoplasty techniques intraocular procedures as well, it seems reasonable to consider standardizing the use of intracameral antibiotics accordingly. Furthermore, due to the increasing numbers of corneal transplants being performed worldwide [6], the reports of endophthalmitis after these procedures are on the rise [1]. Given the different practice patterns among corneal ophthalmologists regarding the use of antibiotics, we consider that the scientific community needs to standardize antibiotic prophylaxis for keratoplasty, determining the best type of drug, dose, route, and time of administration with randomized clinical trials similar to those performed in cataract surgery.

### Compliance with ethical standards

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