

## Intracameral moxifloxacin after cataract surgery: a prospective study

### Moxifloxacino intracameral após cirurgia de catara: estudo prospectivo

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Dear Editor,

We read with interest the article entitled “Intracameral moxifloxacin after cataract surgery: a prospective study,” presented by Lucena et al.<sup>(1)</sup>. The authors studied the safety parameters associated with application of intracameral moxifloxacin 5 weeks after cataract surgery. The authors evaluated a consecutive sample of 1,016 cataract surgeries. The primary endpoint was the incidence of acute postoperative endophthalmitis (AEO). The study’s secondary endpoints were intraocular pressure, corrected distance visual acuity, and mean change in corneal endothelial cell density. No case of AEO was reported. Intracameral application of moxifloxacin is therefore considered safe. However, it is not possible at this time to conclude whether the absence of AEO observed among the study population is attributable to intracameral moxifloxacin application, use of a topical antiseptic agent, or postoperative administration of moxifloxacin eye drops. Recent publications have reported that an increase in the use of intracameral antibiotics was associated with a decrease in the incidence of AEO from 0.14% to 0.05%<sup>(2)</sup>. The decrease in relative risk for AEO decreased by 60%, whereas absolute risk reduction (ARR) was 0.09%. We sought to determine whether

a significant ARR of 0.09% was justified in terms of cost-effectiveness.

To answer this question, we calculated the number needed to treat (NNT) to prevent one additional poor outcome. The NNT is the inverse of the ARR: in this case,  $100/0.09=1.111$  patients<sup>(3)</sup>. Intracameral moxifloxacin must be used to treat 1.111 in order to prevent one poor outcome. Although the impact of one case of AEO is substantial, impact should not be confounded with risk. We therefore ask readers to consider intracameral moxifloxacin application is cost-effective for the prevention of AEO.

#### REFERENCES

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## Response: Intracameral moxifloxacin after cataract surgery: a prospective study

Resposta: Moxifloxacino intracameral após cirurgia de catara: estudo prospectivo

Dear Dr. Feijó,

We thank you for your analysis of our submitted manuscript. Our prospective study showed that moxifloxacin is safe for intracameral use, in agreement with previous studies. Notably, previous related studies included small numbers of patients or use of retrospective methodology<sup>(1,2)</sup>.

On the basis of your estimate that it would be necessary to treat 1.111 patients with intracameral moxifloxacin to prevent one case of endophthalmitis, and on the basis of the additional cost of US \$0.50 (syringe + drug), we conclude that an investment of less than US \$1.00 per patient would allow clinicians to reduce the incidence of an extremely serious illness that can lead to expensive lawsuits.

We believe this prophylaxis is cost-effective. However, a prospective, randomized clinical trial is necessary to ratify these observations.

Regards,  
de Paiva Lucena N, et al.

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