occurred. Miosis did not respond to intracameral adrenaline irrigation. Although we performed nucleus emulsification successfully, posterior capsule rupture developed during cortical cleaning. Vitreous loss was not present. A foldable intraocular lens was implanted into the sulcus.

Despite well-documented adverse effects, and the advent of a new generation antipsychotic drugs, chlorpromazine remains one of the most commonly used and inexpensive treatments for people with schizophrenia.[4] It has antagonistic effects on α_1ARs, serotonin 5-HT_2 receptors, and dopamine D_1 and D_2 receptors. Its α_1AR-blocking activity is very prominent, and is responsible for some of the side effects including orthostatic hypotension, high-resting pulse rates, and impotence.[5]

We believe that the most likely cause for IFIS in this patient was chronic chlorpromazine use. α_1ARs predominate in sympathetically mediated iris dilator muscle contraction resulting in mydriasis. Long-term blockade of these receptors by chlorpromazine may prevent mydriasis and result in dilator muscle tone loss. We are not sure whether the occurrence of IFIS would be prevented or not if chlorpromazine had been stopped before surgery. Disuse atrophy may have developed in this patient because of long-term use of an α_1AR antagonist. Anyway, we suggest that discontinuation of chlorpromazine might be a wise course of action before cataract surgery to avoid the possibility of IFIS.

References

1 Helzner J. Managing floppy iris syndrome. Use of Flomax has been tied to this complication. *Ophthalmol Management* 2005; **9**(4): 22–74 available online at:http://www.ophmanagement.com/article.aspx?article=86311.
2 Calotti F, Steen D. Labetalol causing intraoperative floppy-iris syndrome. *J Cataract Refract Surg* 2007; **33**(1): 170–171.
3 Ugarte M, Leong T, Rassam S, Kon CH. Intraoperative floppy-iris syndrome, alpha1-adrenergic antagonists, and chronic intake of mianserin: is there an association? *J Cataract Refract Surg* 2007; **33**(1): 170.
4 Adams CE, Rathbone J, Thornley B, Clarke M, Borrill J, Wahlbeck K *et al*. Chlorpromazine for schizophrenia: a Cochrane systematic review of 50 years of randomised controlled trials. *BMC Med* 2005; **3**: 15.
5 Hollister LE. Antipsychotic agents & Lithium. In: Katzung BG (ed). *Basic and Clinical Ophthalmology*, 6th edn. Appleton & Lange: Connecticut, 1995, pp. 432–447.

M Ünal, İ Yücel and A Tenlik

Department of Ophthalmology, Akdeniz University Medical Faculty, Antalya, Turkey
E-mail: mustafaunalmd@gmail.com

The authors do not have any propriety interest

Eye (2007) **21,** 1241–1242; doi:10.1038/sj.eye.6702914; published online 29 June 2007

Sir,

Vitreous and aqueous penetration of orally administered moxifloxacin in humans

We would like to comment on the above paper by Vedantham *et al*.[1] The authors state that 'the spectrum of coverage does not appropriately encompass the most common causative organisms in endophthalmitis, especially *Staphylococcus epidermidis*'. This is based on the assumption that the MIC_{90} of moxifloxacin for *Staph. epidermidis* is 2 μg/ml (Table 1).[2] This is contrary to other publications on MIC_{90} tables for moxifloxacin.[3–5] Published susceptibility tables for moxifloxacin include pathogens isolated from systemic infections and therefore are not representative of endophthalmitis pathogen susceptibilities. When these were examined, the great majority of *Staphylococci* were susceptible to moxifloxacin.[6,7] The authors also state that they decided to test moxifloxacin because of its low MICs against pathogens implicated in endophthalmitis (including Gram-positive bacteria), which is contrary to the MICs in Table 1 that they use for their analysis.

Of notice also are the wide variations of moxifloxacin concentrations in aqueous and vitreous samples in their series. These are contrary to other studies,[8–11] where moxifloxacin achieved very steady concentrations for at least 12 h after oral administration. Their serum concentrations also are variable and in a few cases extremely low, which is not in accordance with bibliography on serum moxifloxacin levels,[3–5] although the usual dose is the same as the one used by the authors (400 mg OD). The authors attribute (in part) low levels of moxifloxacin to the fact that only one dose of 400 mg was administered to 'simulate the clinical scenario'. In general, whenever intraocular penetration of a systemically administered antibiotic is to be determined, higher loading doses are used and in the case of moxifloxacin no hazardous side effects were noted previously.[8–11]

In conclusion, we mention that the results of this paper should be interpreted with caution and that there are numerous data suggesting that moxifloxacin may be a very useful systemic addition in endophthalmitis treatment.

References

1 Vedantham V, Lalitha P, Velpandian T, Ghose S, Mahalakhsmi R, Ramasami K. Vitreous and aqueous penetration of orally administered moxifloxacin in humans. *Eye* 2006; **20**: 1273–1278.
2 Blondeau JM. A review of the comparative *in-vitro* activities of 12 antimicrobial agents, with a focus on five new respiratory quinolones'. *J Antimicrob Chemother* 1999; **43**(Suppl B): 1–11.
3 Andriole VT. Quinolones. In: Finch RG, Greenwood D, Norrby SR, Whitley RJ(eds) *Antibiotic and Chemotherapy.* Churchill-Livingstone: Philadelphia, 2003 Chapter: 29.
4 Krasemann C, Meyer J, Tillotson G. Evaluation of the clinical microbiology profile of moxifloxacin. *Clin Infect Dis* 2001; **32**(Suppl 1): S51–S63.
5 Barman Balfour JA, Wiseman LR. Moxifloxacin'. *Drugs* 1999; **57**(3): 363–373.
6 Mather R, Karenchak LM, Romanowski EG, Kowalski RP. Fourth generation fluoroquinolones: new weapons in the arsenal of ophthalmic antibiotics. *Am J Ophthalmol* 2002; **133**: 463–466.

7 Callegan MC, Ramirez R, Kane ST, Cochran DC, Jensen H. Antibacterial activity of the fourth-generation fluoroquinolones gatifloxacin and moxifloxacin against ocular pathogens. *Adv Ther* 2003; **20**(5): 246–252.
8 Garcia-Saenz MC, Arias-Puente A, Fresnadillo-Martinez MJ, Carrasco-Font C. Human aqueous humor levels of oral ciprofloxacin, levofloxacin and moxifloxacin. *J Cataract Refract Surg* 2001; **27**: 1969–1974.
9 Kampougeris G, Antoniadou A, Kavouklis E, Chryssouli Z, Giamarellou H. Penetration of moxifloxacin into the human aqueous humour after oral administration. *Br J Ophthalmol* 2005; **89**(5): 628–631.
10 Hariprasad SM, Shah GK, Mieler WF, Feiner L, Blinder KJ, Holekamp NM *et al*. Vitreous and aqueous penetration of orally administered moxifloxacin in humans. *Arch Ophthalmol* 2006; **124**(2): 178–182.
11 Fuller JJ, Lott MN, Henson NM, Bhatti AA, Singh H, McGwin Jr G *et al*. Vitreal penetration of oral and topical moxifloxacin in humans. *Am J Ophthalmol* 2007; **143**(2): 338–340; e-pub ahead of print, 23 October 2006.

G Kampougeris[1] and A Antoniadou[2]

[1]Department of Ophthalmology, Athens Medical Centre, Athens, Greece
[2]Fourth Department of Internal Medicine, Athens University Medical School, University General Hospital 'ATTIKON', Athens, Greece
E-mail: gkampougeris@yahoo.gr

Eye (2007) **21,** 1242–1243; doi:10.1038/sj.eye.6702915; published online 6 July 2007

Sir,

Reply to Kampougeris *et al*

I like to thank Kampougeris *et al* for their responses to our article.[1]

The following are our responses to their comments:

(1) Kampougeris *et al* mention that other publications have found majority of staphylococci to be susceptible to moxifloxacin. We too have noted this in our paper. In fact, this was the main reason that prompted us to design the study. The low intraocular concentrations found in our study in contrast to other publications surprised us as well, but we have given reasons that might explain the same in our paper.
(2) Kampougeris *et al* state that we decided to test moxifloxacin because of its low minimum inhibitory concentrations (MICs) against pathogens implicated in endophthalmitis, which is contrary to the MICs in Table 1 that we had used for analysis. We had in fact mentioned that the MIC 90 of moxifloxacin was lower than that for the other fluoroquinolone antibiotics against the pathogens responsible for endophthalmitis and had quoted Table 1 as the reference.[2] Hence, we take issue with the statement that we are contradicting ourselves.
(3) Kampougeris *et al* also mention about the wide variations in the moxifloxacin levels in our series. We have clearly discussed about this in our study: 'Amongst the serum, aqueous, and vitreous concentrations, there appeared to be several values that were considered outliers. We chose to include all data obtained in the study, as the investigators could not explain these high or low concentrations and attributed them to variability of moxifloxacin pharmacokinetics in individual patients.'
(4) Kampougeris *et al* also mention that these variations were not seen in other similar studies. Of note, similar outlier values were noted by Hariprasad *et al*[3] in their series, and here too the authors attributed these to inter-patient variability of drug pharmacokinetics.
(5) They also seem to suggest that certain sampling errors occurred owing to processing delay. We consider this speculation unfortunate and unwarranted and we are disappointed at the suggestion, as we had ensured that all the samples were processed appropriately. The processing was as per our previous publication.[4]
(6) Kampougeris *et al* also mention that the results of our paper have to be interpreted with caution. We too have not claimed so and have mentioned the need for future studies in our paper.

References

1 Vedantham V, Lalitha P, Velpandian T, Ghose S, Mahalakhsmi R, Ramasamy K. Vitreous and aqueous penetration of orally administered moxifloxacin in humans. *Eye* 2006; **20**: 1273–1278.
2 Blondeau JM. A review of the comparative *in-vitro* activities of 12 antimicrobial agents, with a focus on five new 'respiratory quinolones'. *J Antimicrob Chemother* 1999; **43**(Suppl B): 1–11.
3 Hariprasad SM, Blinder KJ, Shah GK, Apte RS, Rosenblatt B, Holekamp NM *et al*. Penetration pharmacokinetics of topically administered 0.5%, moxifloxacin, ophthalmic, solution in human aqueous and vitreous. *Arch Ophthalmol* 2005; **123**: 39–44.
4 Talwar D, Kulkarni A, Azad R, Gupta SK, Velpandian T, Sharma Y *et al*. Intraocular ciprofloxacin levels after oral administration in silicone oil-filled eyes. *Invest Ophthalmol Vis Sci* 2003; **44**: 505–509.

V Vedantham, P Lalitha, T Velpandian, S Ghose, R Mahalakhsmi and K Ramasamy

Retina-Vitreous Service Aravind Eye Hospital & PG Institute of Ophthalmology, Madurai, India
E-mail: drvasumathy@yahoo.com

Eye (2007) **21,** 1243; doi:10.1038/sj.eye.6702916; published online 6 July 2007

Sir,

Acute post-operative infective endophthalmitis detected on first-day check

Proprietary interests: none

Controversy exists as to whether routine first-day post-cataract surgery reviews (FDRs) are required especially for