Letter to Editor: Prophylactic Use of Nonsteroidal Anti-Inflammatory Drugs after Cataract Surgery and Corneal Melt

We read with a great interest the report by Ashena *et al.* of an 84-year-old diabetic female who developed corneal melting 5 days after cataract surgery, where the cause was identified as topical ketorolac drops (Acular®, Allergan Laboratories, Dublin, Ireland) given as prophylaxis against pseudophakic cystoid macular edema (CME).[1] This patient had undergone uneventful first eye cataract surgery, but developed corneal melting in her second eye when given ketorolac in addition to topical dexamethasone/tobramycin drops (Tobradex®, Alcon Laboratories, Geneva, Switzerland). Unfortunately, despite corneal gluing and amniotic membrane graft, the eye could not be salvaged and required permanent subtotal tarsorrhaphy.

The authors are to be commended on a thorough literature review. Corneal melting secondary to topical nonsteroidal anti-inflammatory drugs (NSAIDs) has been widely reported with diclofenac (Voltarol®), ketorolac (Acular®), and bromfenac (Yellox®). Cabourne *et al.* looked at 970 diabetic patients at Moorfields given dexamethasone/neomycin (Maxitrol®, Alcon Laboratories, Dublin, Ireland) and ketorolac after routine cataract surgery, finding 13 patients developed keratopathy, with 5 corneal melts and 1 perforation and endophthalmitis.[2] After this, the routine use of ketorolac and Maxitrol® was discontinued, and separate dexamethasone (Maxidex®, Alcon Laboratories, Dublin, Ireland), chloramphenicol, and ketorolac given routinely to diabetic patients undergoing cataract surgery. To our knowledge, there has been only one case of corneal melt with the use of this regimen over the last 6 years at Moorfields, where circa 20,000 cataract procedures are performed annually.

Diabetics are at increased risk of pseudophakic CME, and this risk increases with the severity of retinopathy.[3] Using topical NSAIDs alongside topical steroids after surgery reduces this risk.[4] Given the well-reported risks of prescribing topical NSAIDs alongside neomycin or tobramycin, we caution against the use of this combination in diabetic patients, who likely have some degree of neurotrophic keratopathy. We recommend the use of NSAIDs alongside Maxidex and chloramphenicol from the prevention of CME in all diabetics. Those with preexisting diabetic macular edema should receive concurrent intravitreal dexamethasone injection (Ozurdex®, Allergan Laboratories, Dublin, Ireland), as this commonly gets worse with cataract surgery.[5] Should macular edema develop in those without it preoperatively and fail to settle with topical therapy, treating with intravitreal dexamethasone is a safe and effective treatment option.

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Conflicts of interest

There are no conflicts of interest.

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