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Sir,

A case of inadvertent ocular perforation and intravitreal injection of depomedrone during peribulbar injection. Good visual prognosis with delayed vitrectomy

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We report a case of inadvertent intraocular injection of depomedrone (methylprednisolone acetate 40 mg/ml). This is a rare complication of peribulbar steroid injection. The need for the procedure to be performed must be strongly assessed in view of the potential complication of perforation.

Case report

A 71-year-old gentleman underwent uneventful left cataract extraction and posterior chamber implant insertion in September 1999. He developed refractory cystoid macular oedema (CMO) 2 months postoperatively, unresponsive to topical/oral steroids and topical nonsteroidal anti-inflammatories. He started to develop osteoporotic joint symptoms while on oral steroids; hence the decision was made to perform a peribulbar steroid injection to reduce systemic steroid sideeffects. A sharp 25-gauge 16-mm needle was introduced transconjunctivally at the junction of the outer third and medial two-thirds of the lower orbital margin. Some resistance to insertion was experienced during needle entry. Aspiration check revealed no blood or fluid. A measure of 1 ml of depomedrone was injected. This was perceived by the patient to be uncomfortable at the time. The eye was then double padded and the patient was asked to keep the pad on till later that day.

The patient presented 24 h later, as an emergency, with reduced vision in the left eye. He reported that he was aware of floaters in the eye soon after the peribulbar injection. Visual acuity prior to the injection was 6/9, and was count fingers 24 h postinjection. Examination

findings were a subconjunctival haemorrhage in the left inferior fornix; anterior chamber debris and white globules of depomedrone were noted floating in the vitreous with some coating the retina inferiorly (Figure 1). The IOP was 12 mmHg. He was commenced on oral ciprofloxacin and topical ofloxacin, atropine, and dexamethasone.

An ultrasound B scan was performed, which revealed vitreous detachment with a mobile subhyaloid collection (Figure 2). No retinal elevation was noted.

A pars plana vitrectomy was performed at the earliest available opportunity, which was just over 48 h after the perforation. Laser retinopexy to needle entry site and air/fluid/gas (C₃F₈) exchange was performed. Postoperative posturing was advised.

He underwent an uneventful postoperative recovery and his visual acuity gradually improved to 6/12 and N5 over a 2-month period. FFA performed 2 months postoperatively revealed persisting CMO. Visual acuity



Figure 1 Slit-lamp photograph showing depomedrone globules in the anterior chamber.

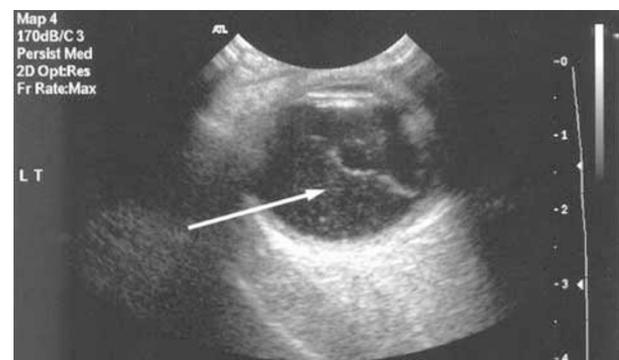


Figure 2 Ultrasound B scan showing subhyaloid collection of depomedrone (arrowhead).

gradually recovered over the following 10 months to 6/9 with eventual resolution of the CMO.

Comments

Vitrectomy¹ and intravitreal steroid injection (triamcinolone)^{2,3} have both been advocated in the management of refractory CMO. However in this case, neither the vitrectomy itself nor the intraocular steroid exposure seemed to have any beneficial effect on the CMO. In fact, the suggested safe dose for intraocular administration of the triamcinolone preparation is almost 20-fold less than that of the steroid injected in this case.⁴

To our knowledge, there have only been 13 cases of inadvertent intraocular depomedrone injections reported.^{5–10} Many were managed conservatively, which mostly lead to serious complications such as ascending optic atrophy.^{5,6} Vitrectomy has been regarded as the treatment of choice for the last 15 years or so. Previous reports advocate immediate vitrectomy to achieve better prognosis;¹⁰ our case was operated on over 48 h following the injection and the visual outcome was satisfactory. This suggests that the intraocular residence time of the depomedrone may not have an adverse effect on visual outcome, although longer residence times may be associated with an increased incidence of complications such as those noted in conservatively managed cases.

The incidence of perforation during peribulbar injection of local anaesthetic has been reported up to 1 in 874.¹¹ In order to try and reduce perforation rates, alterations in technique have been suggested such as watching for corresponding globe movement whilst performing horizontal movements of the needle. This is done following needle insertion but prior to injection.¹² The introduction of newer techniques of periocular steroid administration, such as blunt cannula subtenon injection, avoids the need to introduce a sharp instrument into the orbit, thereby reducing incidences of inadvertent ocular perforation.

References

- 1 Pendergast SD, Margherio RR, Williams GA, Cox MS Jr. Vitrectomy for chronic pseudophakic cystoid macular oedema. *Am J Ophthalmol* 1999; 128(3): 317–323.
- 2 Antcliff RJ, Spalton DJ, Stanford MR, Graham EM, Ffytche TD, Marshall J. Intravitreal triamcinolone for uveitic cystoid macular oedema: an optical coherence study. *Ophthalmology* 2001; 108(4): 765–772.
- 3 Martidis A, Duker JS, Greenberg PB, Rogers AH, Puliafito CA, Reichel E *et al*. Intravitreal triamcinolone for refractory diabetic macular odema. *Ophthalmology* 2002; 109(5): 920–927.

- 4 McCuen BW, Bessler M, Tano Y, Chandler P, Machermer R. The lack of toxicity of intravitreally administered triamcinolone acetate. *Am J Ophthalmol* 1981; 92: 625–627.
- 5 Giles CL. Bulbar perforation during periocular injection of corticosteroids. *Am J Ophthalmol* 1974; 77: 438–441.
- 6 Schlaegel TF, Wilson FM. Accidental intraocular injection of depot corticosteroids. *Ophthalmology (Rochester)* 1974; 78: 847–855.
- 7 Zinn KM. Iatrogenic intraocular injection of Depocorticosteroid and its surgical removal using the pars plana approach. *Ophthalmology (Rochester)* 1981; 88: 13–17.
- 8 Moschicci GB. Incidental introduction of a long-acting corticosteroid in the vitreous humour. *Boll Oculist* 1969; 48: 426–432.
- 9 McLean EB. Inadvertent injection of corticosteroid into the choroidal vasculature. *Am J Ophthalmol* 1975; 80: 835–837.
- 10 Andrew NC, Gregor ZJ. Intraocular injection of Depomedrone. *Br J Ophthalmol* 1986; 70: 298–300.
- 11 Gillow JT, Aggarwal RK, Kirkby GR. A survey of ocular perforation during ophthalmic local anaesthetic in the United Kingdom. *Eye* 1996; 10: 537–538.
- 12 Kraushar MF, Cangemi FE, Morse PH. Prevention of accidental intraocular injection following inadvertent needle perforation of the eyeball. *Ophthalmic Surg Lasers* 1996; 27(5): 405–406.

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Sir,

Dyskinetopsia during light adaptation associated with nefazodone treatment

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Dyskinetopsia is a rare selective defect of motion perception, which results in moving objects being perceived as leaving behind in their trail after-images. We report a case of dyskinetopsia during light adaptation associated with nefazodone and cimetidine treatment.

Case report

A 36-year-old man was commenced on 400 mg daily of nefazodone therapy for anxiety and depression in April 1999. After 12 months, the dosage was increased to 600 mg daily. After 2 weeks, he began experiencing