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Sir,

Globe rupture as a complication of intravitreal injection of triamcinolone

Intravitreal injection of triamcinolone (IVTCA) is a useful treatment modality in various retinal disorders. Few reports have documented adverse events including intractable glaucoma, endophthalmitis, intraocular haemorrhage, and hypotony.[1–4] We report a case of scleral rupture as a complication of this procedure.

Case report

An 85-year-old man underwent right IVTCA for macular oedema secondary to branch retinal vein occlusion (BRVO). The Snellen visual acuity (VA) was hand movement. He had no relevant medical or ocular history.

A bolus of 4 mg of triamcinolone in 0.1 ml was injected via the pars plana inferotemporally using a 27-gauge needle on a 1 ml syringe. The patient experienced pain immediately and the injection was stopped when a popping sound was heard. Examination under anaesthesia revealed a scleral rupture extending from 2 to 6 o'clock along the limbus, sparing the original entry site. There were lens and uveal prolapse subconjunctivally (Figure 1a), superior iridodialysis (Figure 1b), and suprachoroidal haemorrhage superiorly and inferotemporally. The scleral defect was repaired followed by pars plana vitrectomy with 360° endolaser to 'wall off' the choroidal haemorrhage.

Postoperatively, the suprachoroidal haemorrhage resolved (Figure 2) and the VA at 6 months was hand movement.

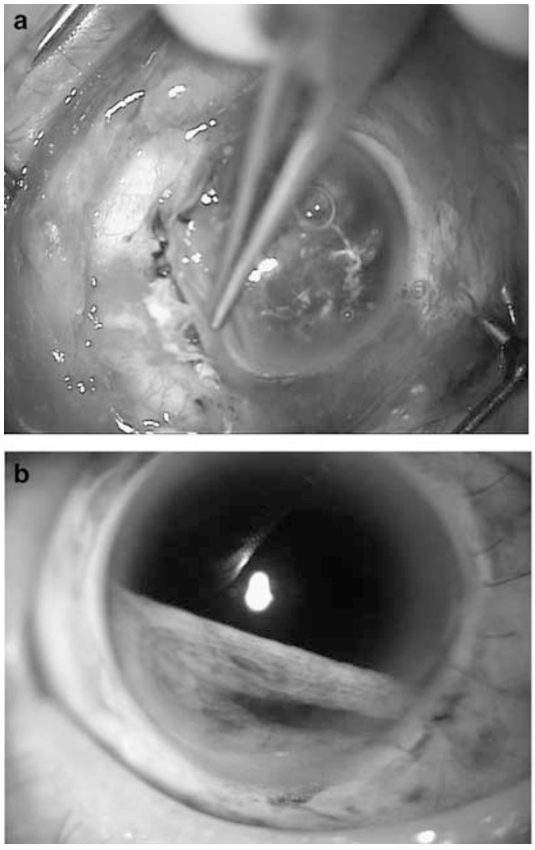

Figure 1 (a) Lens and uveal prolapse through scleral rupture, (b) superior iridodialysis.

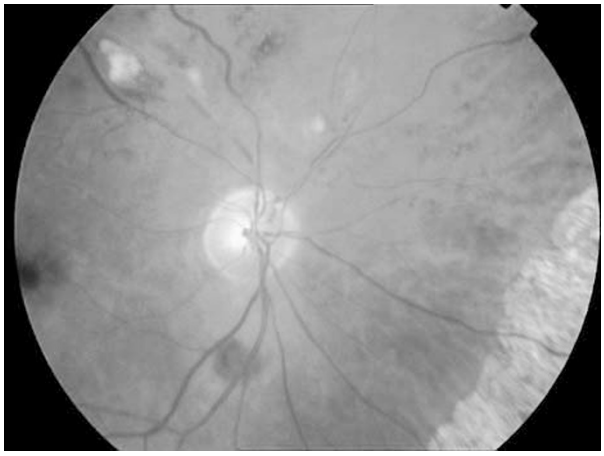

Figure 2 Resolved suprachoroidal haemorrhage.

Comment

Numerous reports support good visual outcome with IVTCA as the treatment of macular oedema. Transient ocular hypertension and cataract are the most common complications occurring in 30 and 10% of patients, respectively.[1–4] Globe rupture to date has not to our knowledge been reported.

Underlying diseases like rheumatoid arthritis, previous ocular surgery or trauma, ocular, and systemic hypertension are predisposing factors to globe rupture.[5,6] Our patient had none of these, although BRVO might indicate occult vascular disease. *In vivo* studies have shown that intraocular injection can cause a sudden rise in IOP which can then lead to a globe rupture.[7,8] The size of the syringe and the force of injection are factors in this induced rise in pressure, according to Pascal's law which states that pressure equals force per unit area ($P = F/A$). When performing this injection using a small syringe, it is also difficult to judge the amount of force applied to the plunger, which can result in this sudden pressure rise. This might be further influenced by forced lid closure, external compressive force like eyelid speculum, and valsava manoeuvre.[7,8]

With the increased popularity of intravitreal injections of steroids and other agents, this report is a timely reminder of the rare but potentially serious side effect.

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Sir,

Retinal pigment epithelial tear following intravitreal bevacizumab

Bevacizumab (Avastin, Genentech Inc, San Francisco, CA, USA) is a recombinant humanized monoclonal IgG1 antibody that inhibits human vascular endothelial growth factor (VEGF). It is used intravitreally to treat choroidal neovascularization (CNV)[1] and other VEGF-mediated diseases. Retinal pigment epithelial (RPE) tears

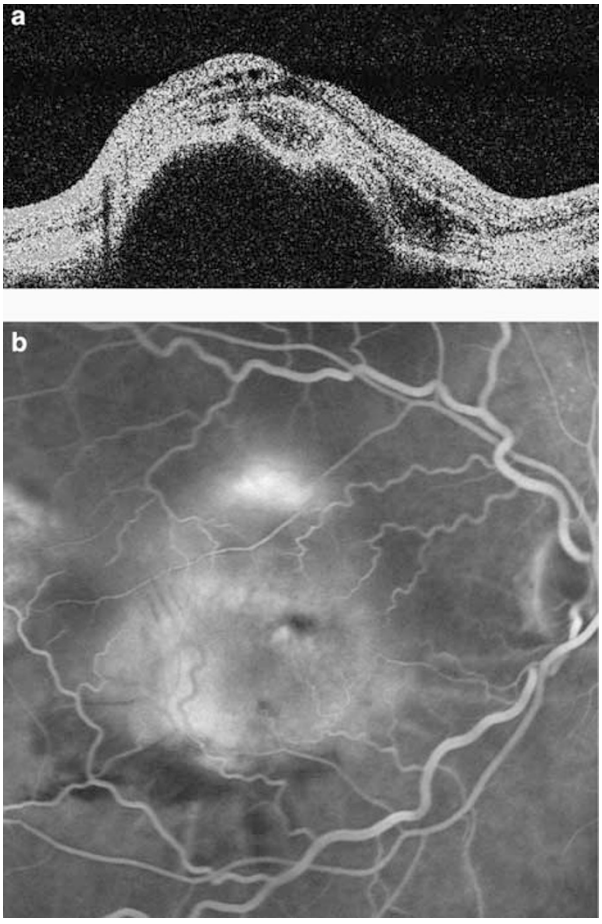

Figure 1 (a) OCT of the right eye. There is a PED with overlying subretinal fluid. (b) Late-phase fluorescein angiogram shows leakage from a large CNV.