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

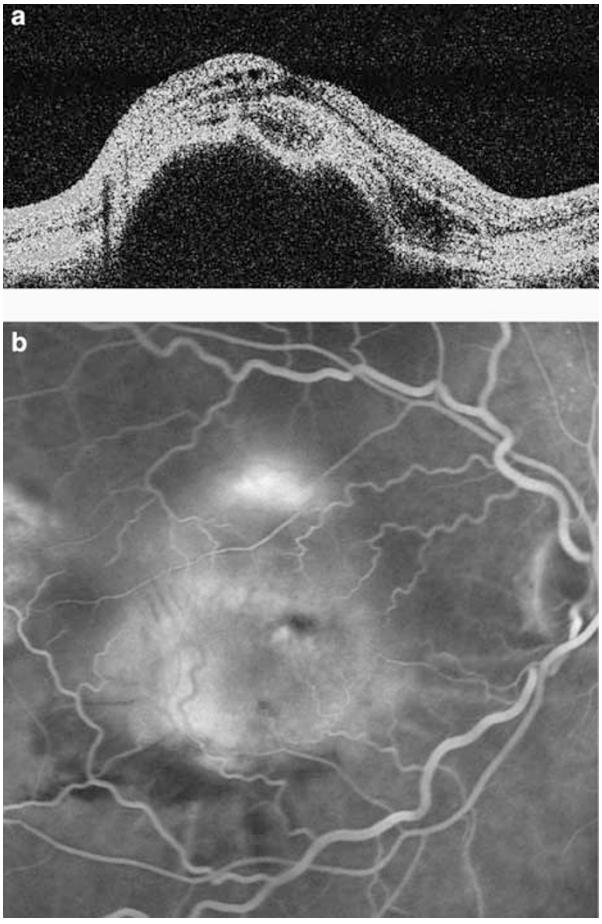

Figure 1 (a) OCT of the right eye. There is a PED with overlying subretinal fluid. (b) Late-phase fluorescein angiogram shows leakage from a large CNV.

may occur spontaneously,[2] after thermal laser treatment,[2] photodynamic therapy,[3] and intravitreal pegaptanib.[4] We describe a patient who had an RPE tear following intravitreal bevacizumab.

A 77-year-old patient with age-related macular degeneration presented with new-onset metamorphopsia. Her best-corrected visual acuity was 20/30 OD and counting fingers at 1 foot OS. Fundus examination showed a large juxtafoveal pigment epithelial detachment (PED) with subretinal fluid, mild sub-RPE haemorrhage, and intraretinal haemorrhage OD. Her left eye had a disciform scar. Optical coherence tomography (OCT) confirmed the findings and fluorescein angiography showed an occult CNV OD. Treatment options were discussed and the patient opted for intravitreal pegaptanib (Macugen®, OSI/Eyetech/Pfizer, San Dimas, CA, USA) OD. Six weeks later, visual acuity decreased to 20/400, OCT showed a more elevated PED (Figure 1a), and fluorescein angiography showed a larger CNV with increased leakage (Figure 1b). As this CNV worsened after pegaptanib, the patient was offered off-label intravitreal bevacizumab, and this was performed OD. One month later, visual acuity was unchanged. OCT showed a high PED with subretinal fluid and a retinal pigment epithelium tear (Figure 2a), confirmed by fluorescein angiography (Figure 2b).

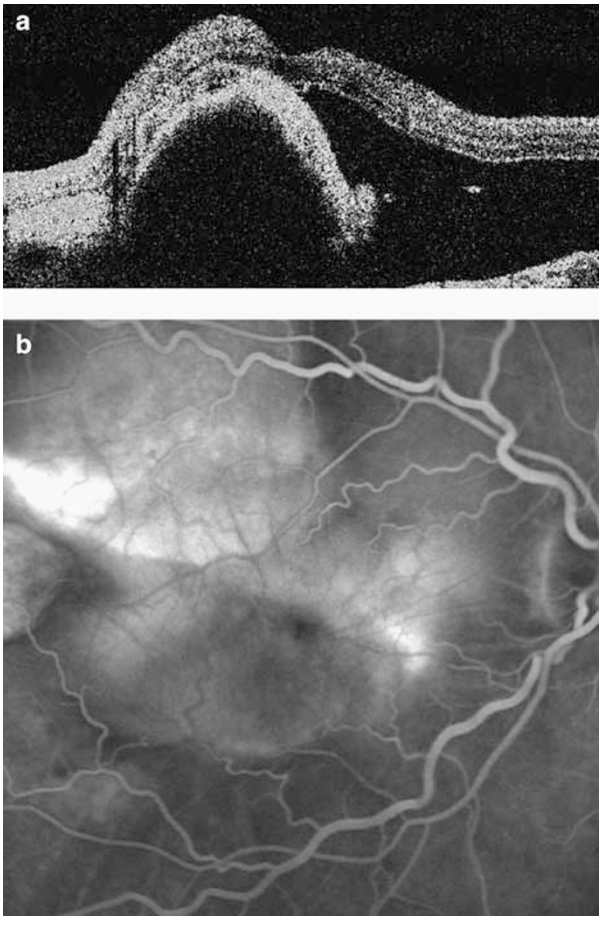

Figure 2 (a) OCT of the right eye 4 weeks after intravitreal bevacizumab. There is a PED with overlying subretinal fluid, and a tear of the pigment epithelium. (b) Late-phase fluorescein angiogram shows leakage from a large CNV with a tear of the pigment epithelium. There is a well-demarcated hyperfluorescent area devoid of pigment epithelium, in the superior macula.

RPE tears can occur spontaneously, and have been reported after interventions such as laser, photodynamic therapy, and intravitreal pegaptanib. As the RPE tear occurred within 4 weeks after treatment with intravitreal bevacizumab, the time course may suggest a possible causal role. In AMD, PEDs may undermine intercellular connections between RPE cells, predisposing them to tear.[2] The bevacizumab may have caused severe contraction of the CNV, placing shearing forces on the RPE, and causing the weakened RPE to contract and tear. Further studies are needed to determine whether eyes with occult CNV and PEDs are more likely to develop an RPE tear than eyes with other types of CNV.

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