



Figure 2 Corresponding fluorescein angiogram with (a) early and (b) late images, showing non-filling of the temporal artery and a corresponding hypofluorescence from non-perfusion of the area supplied by the artery.

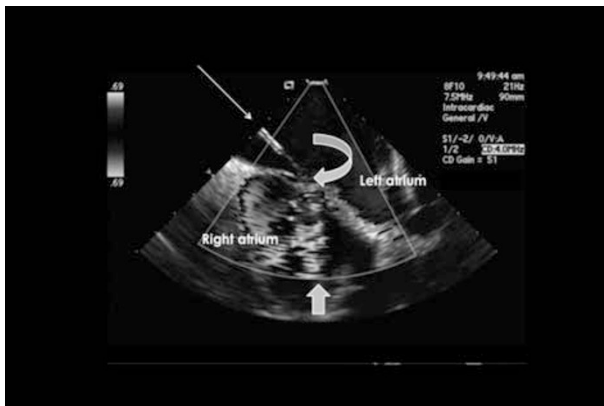


Figure 3 Intra-operative trans-oesophageal echocardiography showing percutaneous femoral catheter (thin arrow) in the right atrium and the closure of the defect (curved arrow). The thick arrow indicates flow towards the defect.

detecting PFO with TEE when compared with TTE. Kramer *et al*⁵ found TEE to have a higher yield than TTE in the evaluation of patients with RAO. As PFOs are usually asymptomatic, for younger patients presenting with a RAO and in whom the TTE and the corresponding work-up have been negative, a TEE is a more sensitive means of diagnosis.

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Sir, Intravitreal bevacizumab as an adjunct in a patient with presumed vascularised choroidal tubercular granuloma

We report an interesting case of presumed vascularised choroidal tubercular granuloma successfully treated with 3 intravitreal injections of bevacizumab (Avastin).

Case report

A 41-year-old man on treatment with a four-drug regimen of antitubercular therapy (ATT), since 6 months

for a diagnosis of histopathologically proven miliary tuberculosis presented with sudden loss of vision in the right eye of 15 days duration. On examination, his best-corrected visual acuity (BCVA) was hand movements close to face and 6/6 in the right and left eyes, respectively. Slit-lamp examination was normal with pigments on the lens. Fundus evaluation of the right eye showed trace vitreous haze (SUN working group),¹ elevated subretinal lesion, subretinal haemorrhage superiorly and secondary retinal detachment inferiorly. There was arterial narrowing with arteriovenous communication (Figure 1). Left eye examination was normal. Fundus fluorescein angiography of the right eye showed brightly fluorescent, ill-defined subretinal lesion with retinal choroidal and retinal venous anastomosis (Figure 2a–c). Polymerase chain reaction on the aqueous from the right eye was positive for *Mtb* genome. A diagnosis of presumed vascularised tubercular granuloma was made. Three intravitreal injections of bevacizumab (1.25 mg/0.05 ml) were given over 3 months (at intervals of 4 weeks) to the right eye. At the last follow-up (8 months), his BCVA was 6/18 with scarring seen in the retina and resolution of the subretinal fluid (Figure 3).

Comment

Choroidal tuberculoma is an amelanotic lesion with indistinct margins and minimal overlying vitreous inflammation, usually seen in the posterior pole. It usually resolves within 12–14 weeks of ATT with or without steroids.² The persistence of granuloma inspite of the ATT, may be probably due to the vascularisation (arteriovenous communication). Only two cases of vascularisation in a tubercular granuloma have been reported (Medline search).^{3,4} One case was treated with photodynamic therapy along with ATT,³ whereas the other was treated with cryotherapy and intravitreal triamcinolone along with ATT.⁴ Intravitreal injections

of bevacizumab have been used to treat choroidal neovascular membranes.⁵ In our case, the sudden diminution of vision was due to the exudation caused by the vascular component. Intravitreal injections of bevacizumab was helpful in causing the regression of the vascular component and hence resolution of the exudative retinal detachment and improvement of vision while on ATT.

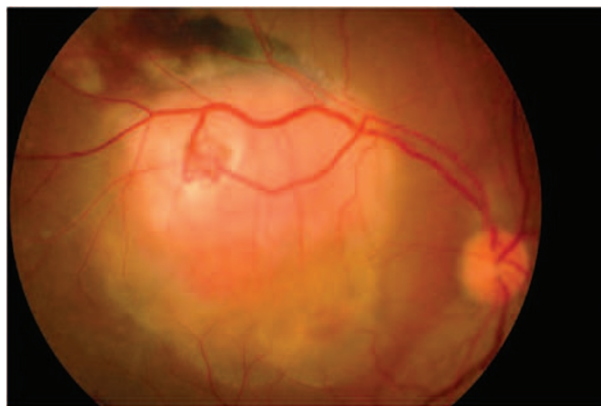


Figure 1 Fundus photograph of the right eye showing elevated yellowwhite subretinal lesion, subretinal haemorrhage, and secondary retinal detachment inferiorly. Arterial narrowing with arteriovenous communication is seen.

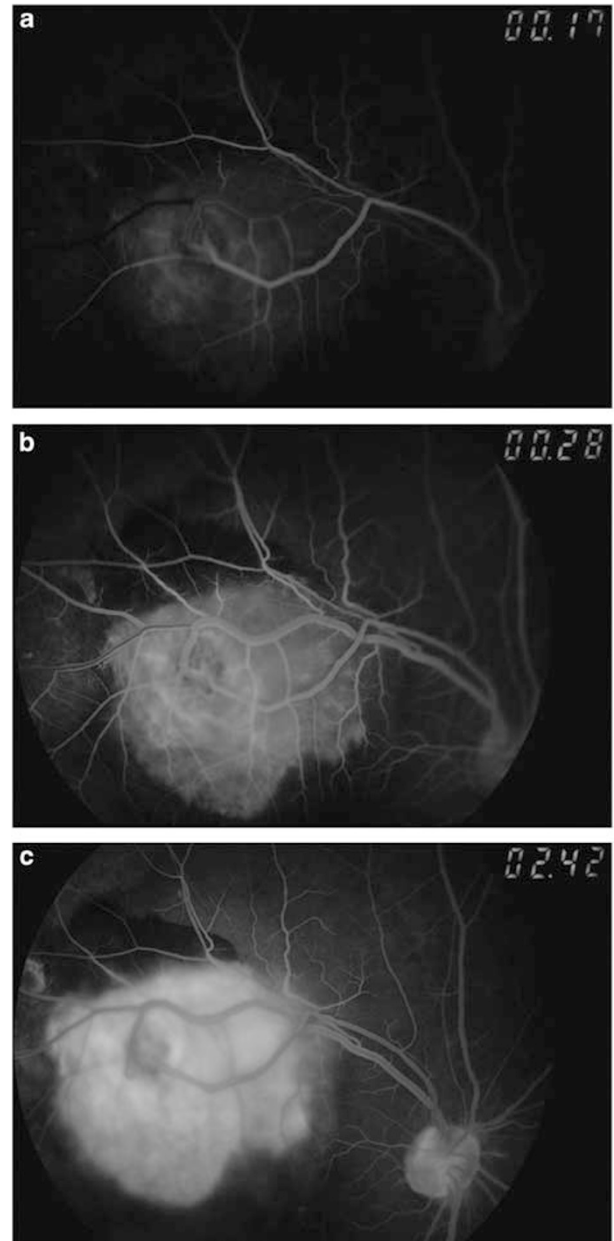


Figure 2 Fluorescein angiography showing brightly fluorescent, ill-defined subretinal lesion with retinal choroidal anastomosis and retinal venous anastomosis in the early middle (a), late middle (b), and late (c) phases.

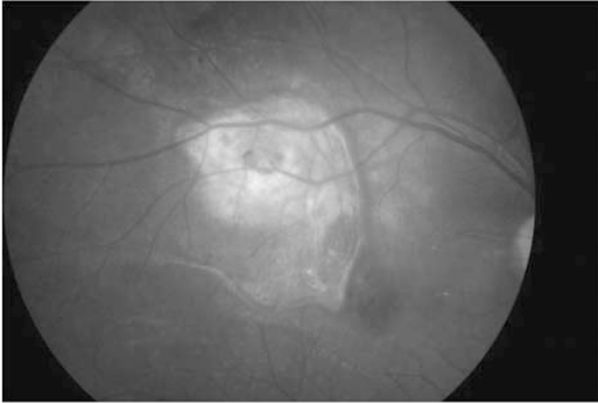


Figure 3 Fundus photograph after three intravitreal injections of bevacizumab showing regression of the lesion and resolution of the exudative retinal detachment.

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