Sir,

Dramatic resolution of massive retinal hard exudates after correction of extreme dyslipidaemia

Case report

A 38-year-old Turkish Cypriot kebab shop owner with Type 2 diabetes was found on routine diabetic retinal screening to have exceptionally severe bilateral exudative retinopathy, with unusually large amounts of lipid deposition (Figure 1a and b). Visual acuities at the time of presentation were 6/60 and 6/9 in the right and left eyes respectively.

The patient had a markedly deranged serum lipid profile with a total cholesterol of 18.9 mmol/l and triglycerides of 35 mmol/l (normal range 0.5–2.1 mmol/l), fulfilling the criteria for the metabolic syndrome.[1] Other causes of secondary hypertriglyceridaemia, including hypothyroidism, renal impairment, excessive alcohol intake and drugs were excluded. He was not hypertensive.

Aggressive lipid lowering therapy with atorvastatin 80 mg daily and nicotinic acid MR 500 mg nocte, resulted in a remarkable reduction in his serum lipids to a total cholesterol of 3.5 mmol/l and triglycerides of 1.9 mmol/l over a 2-year period, with complete disappearance of exudates from the left eye, which retained vision of 6/9 (Figure 1c). The right vision was reduced to hand movements as a result of a dense residual macular plaque, but all other exudates disappeared completely (Figure 1d).

The improvement in his retinopathy was not due to improved diabetic control (HbA1c rose from 8.1 to 9.3% during the 2-year period). Although some focal laser was applied to the left eye, it was insufficient to have contributed significantly to the improvement in retinopathy. Right panretinal photocoagulation for proliferative diabetic retinopathy was carried out following regression of the exudates.

Comment

Elevated serum lipid levels are known to be associated with exudate deposition, subfoveal lipid migration, and subretinal fibrosis[2] and lipid lowering has previously been shown to reduce hard exudates.[3] Hypertriglyceridaemia has recently been shown to be associated with diabetic retinopathy,[4,5] with high statin doses being effective in treating hypertriglyceridaemia.[6] A striking feature of this case was the massive degree of exudative retinopathy on presentation and the almost complete resolution following serum lipid reduction. This case underlines the need for aggressive management of hypercholesterolaemia and hypertriglyceridaemia in diabetic patients and the potential ophthalmic benefits of lipid lowering therapy.

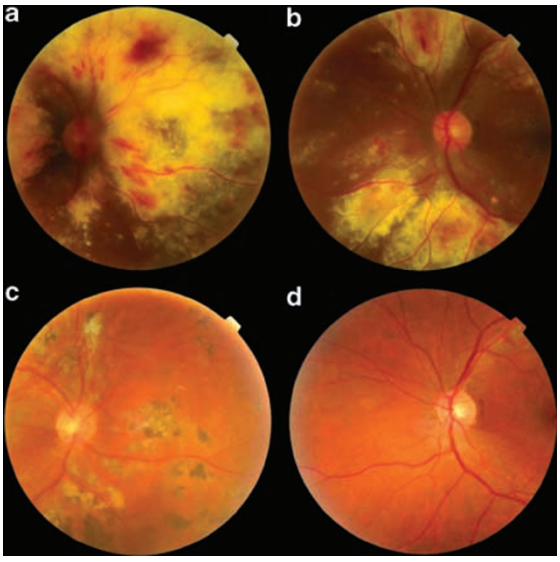

Figure 1 (a) and (b) Nasal views of right and left retina, respectively on presentation in 2004 showing massive exudate. (c) and (d) Nasal views of right and left retina, respectively in 2007 showing almost total resolution of exudate.

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None of the authors has a financial or proprietary interest in the submitted case report.

Eye (2009) **23,** 738; doi:10.1038/eye.2008.109; published online 25 April 2008