Sir,

Delayed onset acute retinal necrosis 20 years following herpetic encephalitis

Acute retinal necrosis (ARN) syndrome consists of a triad of retinal arteritis and phlebitis, confluent rapidly progressive retinal necrosis with vitritis and retinal detachment which occurs in 50–70% of patients within 3 months of the onset of symptoms. It is known to occur in otherwise healthy individuals and occasionally in association with or shortly after herpetic encephalitis. We report a case in which acute retinal necrosis occurred 20 years after the herpetic encephalitis.

Case report

A 46-year-old white man presented to the eye casualty with a 1 week history of rapid reduction of vision in his left eye. He suffers from multiple sclerosis (MS) and has epilepsy, which is related to an episode of herpetic encephalitis 20 years previously. His vision in his left eye was reduced to counting fingers compared with 6/6 in his right eye. On examination his left eye had an intraocular pressure of 36 mmHg, 2+ cells in the anterior chamber, vitreous cells, disc and macular oedema, scattered peripheral and central perivascular retinal haemorrhages and cotton wool spots with yellowish areas of deep confluent retinal necrosis (Fig. 1). His right eye was unremarkable.

A clinical diagnosis of ARN was made and a vitreous biopsy was sent for polymerase chain reaction (PCR); the specimen was tested for a primer directed to sequence glycoprotein D which demonstrated the presence of herpes simplex virus (HSV) type 1 DNA, while the serum titres were normal. A CT scan of the brain showed marked atrophy of the right temporal lobe consistent with the old herpetic encephalitis (Fig. 2). He was commenced on 350 mg acyclovir 8-hourly by intravenous infusion for 8 days. This was subsequently changed to 800 mg acyclovir orally five times a day. The necrotic retina remained attached but vision dropped to no perception of light due to optic atrophy.

It is worth noting that 2 years before presenting to us, in one of his neurology clinic visits, he had visual evoked potential (VEP) tests for evaluation of optic nerve involvement from MS and was found to be severely delayed in the left eye compared with the right eye.

Comment

ARN was first described in 1971 by Urayama and co-workers.[1] In bilateral disease it is well known that there may be a long gap between involvement of the first and second eyes. In 1991 Ahmadieh *et al.*[2] described a case of ARN occurring shortly after an episode of herpetic encephalitis. Since then the association between herpetic encephalitis and ARN has been reported with a longer interval between the encephalitis and ARN, although the interval usually ranges from 1 to 5 months. Pavesio *et al.*[3] described 2 cases with an interval of 7 and 17 years between encephalitis and ARN, both of which had ocular

Fig. 1. *Left fundus showing retinal haemorrhages and exudation along the course of blood vessels with yellowish areas of retinal necrosis and some degree of disc swelling.*

complications in the form of optic atrophy from the initial encephalitis. It has been suggested that the virus may have remained dormant in the ocular tissue or the central nervous system and later travelled (in a retrograde direction) from the lateral geniculate body to the optic tract and then down the optic nerve.[4] Levinson *et al.*[5] recently reported on a case of ARN 16 years after neonatal HSV encephalitis, they like Pavesio *et al.*[3] elected to continue the oral acyclovir as long-term prophylaxis against second eye involvement. As there is no agreement on this management we elected not to use prophylaxis.

Our case represents the longest reported period of quiescence (20 years) between the herpetic encephalitis and reactivation of the virus to cause ARN. Also, since the eye affected with ARN is the one whose optic nerve suffered more from demyelination, the association of MS

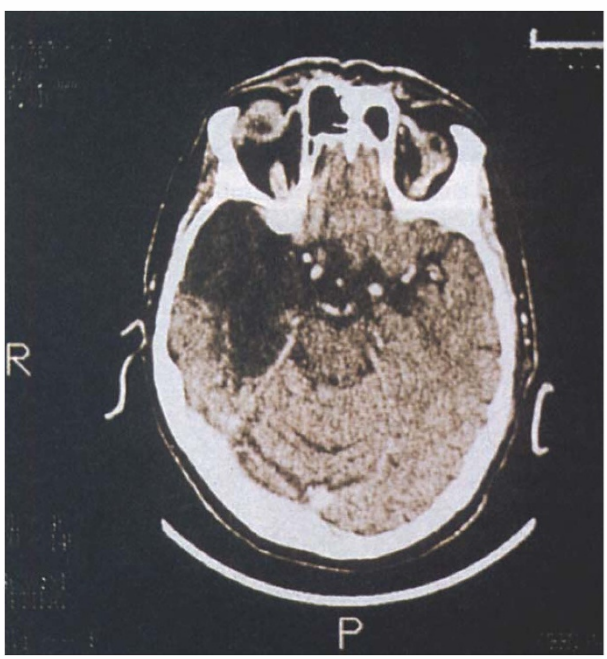

Fig. 2. *Brain CT scan showing marked atrophy of the right temporal lobe related to an episode of old herpetic encephalitis.*

raises the question of whether MS, as a demyelinating disease with associated retinal vasculitis, could be a risk factor for late-onset ARN in patients who have suffered previous herpetic encephalitis.

References

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Sir

The role of IgM isotype anticardiolipin antibodies in occlusive ocular vascular disease: report of two cases with primary antiphospholipid antibody syndrome

Several studies have clearly shown that the primary antiphospholipid antibody syndrome (PAPS) is associated with cerebral ischaemia and occlusive ocular vascular disease.[1–7] Most of the studies that assayed for anticardiolipin (aCL) antibodies showed that the IgG isotype was clearly more frequent than the other two isotypes and is the only significant one among patients with cerebral ischaemia or ocular vascular thrombosis.[3,5,7–11]

We describe two PAPS patients with vaso-occlusive ocular disease in the presence of high-titre IgM aCL antibodies without a concomitant IgG isotype, and suggest that the IgM isotype is also associated with ocular vascular thrombosis in PAPS.

Case reports

Case 1. A 40-year-old man noted decreased vision in his right eye in July 1998. His visual acuity in the right eye was 20/70 and in the left eye 20/20. The results of a colour vision test (Ishihara) were 7/12 in the right eye and 12/12 in the left eye. The anterior segment and intraocular pressure of both eyes were normal. On ophthalmoscopic examination, the right optic disc was oedematous; the veins looked tortuous and engorged and were surrounded by intraretinal haemorrhages and a few cotton wool spots. The left fundus appeared normal. Fluorescein angiography showed an increased venous transit time with staining of the retinal veins and leakage of fluorescein from dilated capillaries in the right eye and normal findings on the left side (Fig. 1). MR imaging of the brain and routine laboratory tests were all normal except for a low platelet count ($110 \times 10^3/\mu l$). The antinuclear antibody and anti-DNA test results were negative. Further coagulation studies showed an increased level of IgM aCL antibodies of 6.31 MPL (normal values: 0–1.10 MPL). The results of tests for VDRL, Lyme and HIV were negative. The patient had no history of exposure to certain drugs such as phenothiazines.

The patient was diagnosed as having central retinal vein occlusion due to primary antiphospholipid syndrome associated with IgM aCL antibodies. He was treated with warfarin and remained without further episodes during 9 months of follow-up. The latest neuro-ophthalmological examination revealed 20/20 vision in the right eye with a normal fundoscopic appearance (Fig. 1).

Case 2. A 28-year-old woman noted a sudden decrease in vision in the right eye in the first week of January 1999. Fifteen days later a similar symptom occurred in her left eye and she was evaluated in our department. She had no light perception in both eyes. The pupils were dilated and unreactive to light. The fundoscopic examination revealed optic nerve atrophy in the right eye and a swollen disc in the left eye. She had had an unexplained spontaneous abortion at approximately 16 weeks of gestation 2 years previously. MR imaging of the brain and orbits was normal. Routine laboratory tests and spinal fluid examination showed no abnormalities. The

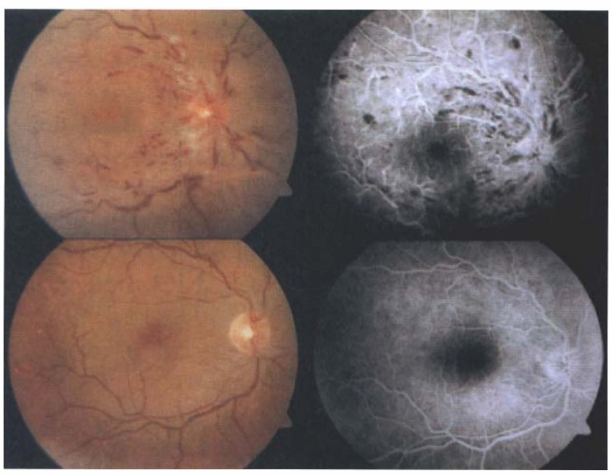

Fig. 1. *Upper left: Fundus photograph shows central retinal vein occlusion with engorged retinal veins, flame-shaped retinal haemorrhages and peripapillary cotton wool spots. Upper right: Fluorescein angiography demonstrates dilatation and staining of retinal veins and leakage from dilated capillary vessels. Lower left: Fundus photograph 9 months later reveals resolution of the retinal haemorrhages and cotton wool spots. Lower right: Fluorescein angiography 9 months later discloses mild leakage at the posterior pole in the late phase. There was no macular oedema.*