CASE REPORTS

RETINAL MIGRAINE

A teaching case in a recent issue of the *Canadian Medical Association Journal* highlights an important type of migraine. A 40-year-old man was referred to the authors with multiple episodes of transient monocular visual loss since adolescence. He described seeing small, translucent, grey spots similar to those seen after looking at a bright light. The visual defects were only ever present in one eye, but occurred in both eyes, that is, monocular. The episodes lasted about 5 - 10 minutes, occurred about 2 - 3 times a day and were often associated with a migraine-type headache. The headache began 30 minutes after the onset of the visual symptoms. The headaches were apparently unilateral, pounding, lasted up to 4 hours and were sometimes associated with nausea, vomiting, photophobia and phonophobia. The headaches responded well to treatment with ibuprofen, but the visual symptoms were unaffected by treatment.

The patient had normal visual acuity in both eyes and his intraocular eye pressure was also normal. Gross examination of the visual fields was normal, as was the rest of the ophthalmological and neurological examination. He had mild hyperlipidaemia, a normal ECG, a normal carotid duplex Doppler examination and a normal echocardiogram. He was diagnosed as having retinal migraine and given daily therapy with aspirin and verapamil. The frequency of episodes of transient visual loss decreased from 2 - 3 attacks a day to 2 - 3 attacks a week.

Retinal migraines are transient monocular visual disturbances such as scintillations, scotomas or blindness. They can occur at the same time as migraine headaches and are sometimes seen in a patient with a prior history of migraine. They occur because of hypoperfusion of either the eye or the optic nerve. This is a different entity to typical migraine with aura, which involves the cerebral cortex and is associated with binocular visual phenomena. Retinal migraines occur in about 1 in every 200 patients with migraine. Most patients are less than 40 years when they are diagnosed. Nearly 30% have a past history of non-retinal migraine with or without aura and 25% have a relative with retinal migraines.

Retinal migraine has a very variable presentation. Some patients describe mainly visual loss consisting of black, grey, white or shaded areas of varying size that suddenly appear or gradually progress inward from the peripheral visual field. Others describe flashing lights and scintillating scotomas. Symptoms are always monocular, last 5 - 20 minutes and can occur several times a day. Headaches, when they occur, may be with or after the visual symptoms. Precipitants to an attack are not clear and the prognosis seems to be the same as that of migraine with aura. The diagnosis of retinal migraine is by exclusion.

The authors recommend prophylactic treatment if the episodes are disabling and occur more than twice a week. Low-dose daily aspirin is well tolerated and anecdotal reports suggest that it can be effective. Calcium-channel blockers such as verapamil and nifedipine, beta-blockers and inhaled amyl nitrite have also been reported as effective.

Gan KD, *et al. CMAJ* 2005; **173:** 1441 - 1442.

PITFALLS OF HYPEREMESIS GRAVIDARUM

An interesting case report in the *Medical Journal of Australia* reminds us that there can be unusual consequences to relatively common conditions. Mervin Ferdinands and his colleagues report on a 22-year-old woman who was 12 weeks pregnant. She presented to a country hospital with uncontrollable nausea and vomiting that was initially controlled with anti-emetics, but over the next 4 weeks she continued to vomit 5 or 6 times a day. At 16 weeks' gestation she presented again with more frequent vomiting, complaining of poor sight and double vision that had been present for several days. She did not have any gait disturbance, no change in mental state or an associated headache. She was admitted and treated with intravenous fluids, including glucose.

A week after admission her vision deteriorated and she became confused and unsteady on her feet. She was then transferred to the Royal Melbourne Hospital. When she first arrived in Melbourne she was drowsy. Her blood pressure was normal and she had no neck stiffness or rash. By now she had a noticeable ataxia and mild lower limb peripheral neuropathy with absent deep tendon reflexes. She also had bilateral horizontal nystagmus and poor vision (right 6/36, left 6/18). There was an associated right gaze paresis with intact visual fields. There was no pain with eye movements.

Her past history was unremarkable, this was her first pregnancy, she did not take any medication and did not

drink or smoke. Ultrasonography of the fetus was normal. A full blood count was normal, but kidney functions showed slightly low urea and creatinine. Her INR was 2.0. Her gamma glutamyl transferase, alanine aminotransferase and bilirubin were elevated. CSF was normal, but an MRI of the brain revealed bilateral thalamic lesions. A diagnosis of Wernicke's encephalopathy was made, with thiamine deficiency suspected to be secondary to hyperemesis gravidarum. Her serum thiamine levels were only marginally low, but pyridoxine, folic acid and intravenous thiamine replacement was started. She made a rapid clinical recovery. Her vision returned to normal within 3 days and her ataxia, gaze limitation and neuropathy improved. Repeat MRI after 7 days showed moderate resolution of the hyperintensities. She went on to deliver a healthy baby girl at 37 weeks.

The authors point out that thiamine plays an important role in carbohydrate metabolism. Low thiamine levels are associated with poor intake or absorption, increased demand or poor utilisation. Thiamine requirements are known to be increased in pregnancy, thought to be as a result of sequestration of the vitamin by the placenta and the fetus. In hyperemesis gravidarum this deficiency would be aggravated by impaired absorption caused by intractable vomiting. In addition, prolonged use of glucose without thiamine can be a potent precipitant of Wernicke's encephalopathy and this may have been the case in this patient. This case was unusual in that impaired vision was the first symptom of an evolving thiamine deficiency – with delayed presentation of the classic triad of ataxia, mental confusion and ocular gaze problems. This patient's thiamine was only slightly reduced, but the authors feel that this may have been because of partial correction by food intake while at the country hospital. If left untreated, thiamine deficiency can lead to severe neurological, cardiovascular and gastrointestinal illness.

Ferdinands MD, *et al. MJA* 2005; **182:** 585-586.

Bridget Farham

SINGLE SUTURE

OBESITY AN INDEPENDENT RISK FACTOR

If all that is wrong with you is obesity, are you still at higher risk of heart disease than someone of normal weight? This is the question asked by Lijing Yan and colleagues in a recent edition of the *Journal of the American Medical Association*. Obesity is known to be a risk factor for heart disease, but do you have to have all the other things that go with increased risk such as deranged lipids, high blood pressure and years of smoking? Yan and team looked at more than 17 000 men and women aged between 31 and 64 who had no signs of heart disease at baseline. They found that, even if a person had normal blood pressure, normal lipids and did not smoke, obesity in middle age predisposed to heart disease. So maybe there is no such thing as fat and healthy?

Yan L *et al. JAMA* 2006; **295:** 190-198.

SINGLE SUTURE

THE FOUR FOUNDERS OF ISRAEL

New genetic research shows that 4 women who lived in Europe 1 000 years ago were the ancestors of 40% of the surviving Ashkenazi Jews around the world according to a study published recently in the *American Journal of Human Genetics*. The remaining 60% had a more heterogenous gene pool. Because of its relative isolation over many centuries the Ashkenazi population, which accounts for most of the world's Jews today, is also known to have accumulated some 20 recessive hereditary disorders (such as Tay-Sachs disease) that are rarely found in other populations. When I told a Jewish friend of this research, he pointed out that the Bible mentions 4 women as the founders of Israel: Sarah, Leah, Rebecca and Rachel. As he said, 'Now is that precient or what?'

BMJ 2006; **332:** 140.