

NELSON'S EYE



Bulletin 9. February 2004

A GP phoned the other day for advice about the following patient: a 50 year old female who described a black central visual field defect that came on for 15 minutes or so and then cleared. It is always satisfying to sort things out over the phone and of course far more convenient for the patient, and I was happy enough to diagnose migraine. Sure enough, on further questioning the past history of migraine was elicited. So here are some thoughts on migraine from the eye doctor's point of view.

Classical Migraine

Classical migraine (migraine with visual aura) is less common than "common migraine" but better recognised.

- the attack is heralded by a visual aura which lasts about 20 minutes. This may consist of bright or dark spots, zig-zags, heat haze distortions, jig-saw puzzle effects, scintillating scotomas, tunnel vision or fortification spectra, which may progress to homonymous hemianopia
- a small bright positive paracentral scotoma develops, lined on one side with luminous zig-zag lines
- after several minutes the fortification spectrum gradually enlarges with the open end pointing centrally. It is often lined on the inner edge by an absent area of vision (negative scotoma).
- as the scotoma expands it may drift towards the temporal periphery before breaking up
- the headache follows the aura and is usually hemicranial, opposite the hemianopia and is accompanied by nausea and photophobia. It may however **be absent**, trivial or very severe, with considerable variation between attacks even in the same individual.
- these visual features, supposedly pathognomonic of migraine, may be caused by degenerative arterial disease in the occipital cortex

Lastly, sometimes when we diagnose migraine the patients say, "well sure, but this is different from any migraine I have ever had before." Yes – migraine does evolve and change with time in each individual.

Differential Diagnosis

As we have seen, the visual phenomenon of migraine are typically binocular, zig-zag, scintillating and migrate within the visual field. This is often followed by a scotoma and/or homonymous visual loss. The following conditions should be considered in the differential diagnosis.

- acute posterior vitreous detachment – is characterised by photopsia, usually associated with a sudden onset of floaters. The flashing lights are projected into the temporal visual field and may be precipitated by movements of the head or eyes and often occur in darkness. More common in myopes.
- transient ischaemic attacks – due to retinal micro-embolisation, are unilateral and not scintillating. The patient describes a “shade” or “cloud” which typically starts in the upper or lower parts of the visual field and spreads centrally. It lasts several minutes and clears from the centre to the periphery. Usually occurs in vasculopathies.
- transient visual obscurations – last only a few seconds and are characterised by a “greying out” or “darkening” of vision in one eye or both. They occur in patients with papilloedema and are precipitated by changes in posture. **They may also precede optic nerve ischaemia (and blindness) in patients with giant cell arteritis.**

Other rare forms of migraine with ophthalmic features

- retinal migraine – acute, transient, unilateral visual loss. This occurs in middle-aged patients without past history of migraine – so investigate such patients for retinal emboli.
- ophthalmoplegic migraine – is rare, occurs in children, causes recurrent transient 3rd nerve palsy.
- cluster headache – remember these are a common cause of Horner’s syndrome.

There’s something in the water?

Just to let you know that Simone our ophthalmic nurse and Jo our orthoptist are both into their second trimesters, so the eye dept may well be in for some changes mid-year.

Please let us know if this newsletter is relevant/ useful/ interesting to you, or if you have any suggestions or special requests.

Happy New Year and regards, Graham Wilson.