

# Out of Hours

## Keep an eye on the SSRI:

help avoid possible sight-threatening adverse events

A recent report in a peer-reviewed UK journal outlines five cases of optic neuropathy thought to be related to long-term treatment with selective serotonin reuptake inhibitors (SSRIs).<sup>1</sup> These five were identified over a 2-year period within an island population of 140 000. Each case was assessed using the Naranjo algorithm to indicate likelihood of adverse drug reaction (ADR).<sup>2</sup> The Naranjo scores indicated possible ADR in four cases and probable ADR in one case.

All five cases presented with visual loss from suspected ischaemic optic neuropathy (ION) and were all extensively investigated for any other possible underlying cause. A 'non-arteritic' ischaemic origin was suspected in all cases. Toxicity was felt to be unlikely since three cases were of sudden onset and two cases were unilateral.

Two cases experienced progressive bilateral visual field (VF) loss. Two cases presented with severe unilateral sudden loss of vision (SLOV), and one patient had bilateral SLOV. All patients were relatively young (mean 49 years, range 40–54 years) with a long history of SSRI treatment with a mean of 7 years (range 1–14 years).

All cases were able to discontinue SSRIs without any further deterioration. One patient with bilateral progressive LOV recovered completely over 18 months. Two patients with unilateral SLOV did not recover function in the affected eye but retained normal vision in the second eye.

One case was diagnosed with anterior ION (involving short posterior ciliary arteries) which presents with sudden optic disc swelling associated with altitudinal visual field loss. Four cases had clinical features of posterior ION (involving pial branches of central retinal artery) which are typically normal disc appearance at the outset with acute or progressive, painless LOV in one or both eyes.

Posterior ION in relatively young healthy patients is rare. Systemic risk factors for ION include cardiovascular disease, diabetes, and hypertension. Two of the patients reported suffered with non-insulin-dependent diabetes mellitus and three were smokers.

All patients were able to stop taking SSRIs without any further deterioration. One patient with bilateral involvement recovered completely after 18 months, and one patient remained stable for 6 months until restarting an SSRI, after which she declined

*"... we are beginning to see evidence of ocular ischaemic events in otherwise reasonably healthy young adults, seemingly associated with long duration of SSRI treatment."*

rapidly to count fingers vision in both eyes.

### POSSIBLE SSRI SIDE EFFECTS

With long-term SSRI treatment it has been suggested that multiple transient vasospasms in the optic nerve could progressively induce a manifest ischaemic optic neuropathy. This has already been predicted pharmacologically. Costagliola *et al* described a mechanism for vasospasm in the optic nerve, postulating that increased plasma serotonin levels may be a factor, or a cofactor, in the development of optic nerve perfusion disorders.<sup>3</sup> In individuals with atherosclerotic the susceptibility becomes higher due to serotonin-enhancing platelet aggregation on atheromata of ocular arteries.<sup>3,4</sup>

The most commonly-reported ophthalmic side effect of SSRIs is acute glaucoma. There is a single report of central retinal vein thrombosis in association with citalopram. The literature now contains reports of suspected associations with other thromboembolic events such as deep vein thrombosis and ischaemic stroke.<sup>1</sup>

The ION described before may be related to prolonged treatment and possibly also interacts with other risk factors such as smoking and diabetes. I recommend a review of SSRI treatment in cases of acute optic neuropathy, and advise caution when prescribing SSRIs.

In conjunction with known systemic vascular risk factors or pre-existing vascular eye disease. In 2004, approximately 7% of the UK adult population were receiving SSRI treatment for a range of 4.8–7.7 years.<sup>5</sup>

### DON'T LOSE SIGHT OF THE DANGERS!

I believe we are indeed beginning to see

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evidence of ocular ischaemic events in otherwise reasonably healthy young adults, seemingly associated with long duration of SSRI treatment. This is perhaps a timely reminder that these drugs should not be prescribed with impunity and the need for ongoing, regular re-evaluation of patients taking SSRIs.

The number of potential puns seems endless, but I'll settle for ... *Keep an eye on the SSRI!*

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### REFERENCES

1. Lochhead J. SSRI-associated optic neuropathy. *Eye (Lond)* 2015; **29(9)**: 1233–1235.
2. Naranjo CA, Busto U, Sellers EM, *et al*. A method for estimating the probability of adverse drug reactions. *Clin Pharmacol Ther* 1981; **30(2)**: 239–245.
3. Costagliola C, Parmeggiani F, Semeraro F, Sebastiani A. Selective serotonin reuptake inhibitors: a review of its effects on intraocular pressure. *Curr Neuropharmacol* 2008; **6(4)**: 293–310.
4. Hayreh SS. Retinal and optic nerve head ischemic disorders and atherosclerosis: role of serotonin. *Prog Retin Eye Res* 1999; **18(2)**: 191–221.
5. Petty R, House A, Knapp P, *et al*. Prevalence, duration and indications for prescribing of antidepressants in primary care. *Age Ageing* 2006; **35(5)**: 523–526.