Masking of Papilledema by Glaucoma

Sir,

We read with interest the article titled, " Long-term response of cerebrospinal fluid pressure in patients with idiopathic intracranial hypertension: A prospective observational study" by Gafoor *et al*.[1] We appreciate the authors effort and their research. We would like to highlight few points regarding (i) the interaction between intraocular pressure (IOP) and intracranial pressure (ICP) in idiopathic intracranial hypertension (IIH), (ii) the presence or absence of papilledema in IIH, and (iii) the importance of visual function assessment in IIH.

In Gafoor *et al*.'s[1] case series, a subset of four IIH patients did not have papilledema at onset. All the patients in this study received acetazolamide and frusemide. Our assumption is that probably they developed papilledema during the course of disease. This is an important observation from neuro-ophthalmic perspective. This subset of patients (absent papilledema at onset of IIH) might have had elevated IOP due to preexisting, undetected glaucoma. Due to diurnal variation of IOP, a single reading might miss raised IOP. Acetazolamide-induced IOP reduction would have changed ICP/IOP pressure gradient, resulting in the development of papilledema. IOP may be an important factor in optic disc swelling.[2] Lowering IOP may "unmask" disc swelling from elevated ICP, altering the translaminar pressure gradient. Vomiting is a common feature of elevated ICP. Vomiting-induced Valsalva maneuver (VM) may cause elevated IOP even in normal individuals.[3] Hence, VM-induced IOP elevation would have contributed to masking of papilledema in this subset of IIH patients.

Usual practice in perimetry is to perform standard automated perimetry 30-2 (SAP) to document visual loss in IIH. This perimetry measures visual field loss within central 30°. Kinetic perimetry is ideal for documenting visual field loss beyond central 30°. SAP is suitable for diagnosing glaucoma. In IIH, loss of visual function is the early serious complication. Visual acuity, peripheral, and central fields should all be sequentially recorded.[4] The visual loss is usually insidious and often asymptomatic for long periods of time, and visual disaster can only be anticipated by monitoring the visual fields and acuity. To conclude, IOP should be periodically evaluated in IIH patients, who present with asymmetrical papilledema or if papilledema develops following acetazolamide therapy.

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Conflicts of interest

There are no conflicts of interest.

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