

SHORT COMMUNICATION

Contraceptives, cerebral vein thrombosis, and choked discs

A.R. REDDY, O.C. BACKHOUSE

Department of Ophthalmology, St James' University Hospital, Leeds, UK

PURPOSE. *To raise awareness of the importance of prompt and appropriate imaging in patients presenting with signs and symptoms suggestive of idiopathic intracranial hypertension.*

METHODS. *Case report with diagnostic tests and discussion of management options.*

RESULTS. *A 15-year-old girl presenting with bilateral optic disc swelling was noted to have extensive thrombosis of intracerebral venous sinuses with the clot extending along the internal jugular vein as inferior as the root of the neck demonstrable on magnetic resonance venography.*

CONCLUSIONS. *Ophthalmologists should be vigilant in obtaining appropriate imaging in cases of optic disc swelling. (Eur J Ophthalmol 2007; 17: 669-70)*

KEY WORDS. *Contraceptives, Cerebral vein thrombosis, Choked discs, Optic disc swelling, Imaging*

Accepted: April 4, 2007

INTRODUCTION

Bilateral optic disc swelling is a common presentation in neuro-ophthalmic practice. Secondary causes of raised intracranial pressure such as tumors and cerebral vein thrombosis need to be diagnosed promptly as these have potential for early intervention and definitive management option. The prognosis for visual function in such cases depends to a large extent on early and aggressive management of the underlying cause. This is a report of a girl with bilateral optic disc swelling secondary to extensive cerebral vein thrombosis. The diagnostic modalities, management options, and prognosis are discussed.

Case report

A 15-year-old girl presented with complaints of 2 weeks' duration of right-sided neck pain and bilateral transient obscuration of vision. She had been on oral contraceptive pill (Microgynon) for the preceding 5 months and smoked 10 cigarettes a day. There was no past history or family

history of venous thrombosis. The best-corrected visual acuity was 6/12 in the right eye and 6/6 in the left eye with impaired color vision in the right eye. Funduscopy revealed bilateral grade 4 disc swelling.

CT scan raised the suspicion of intracranial venous sinus thrombosis. Magnetic resonance venography (MRV) confirmed thrombosis of intracerebral venous sinuses with the clot extending along the internal jugular vein as inferior as the root of the neck (Figs. 1 and 2). Blood counts, coagulation screen, thrombophilia screen, and lupus screen were normal. Anticardiolipin antibody titer was within normal range and blood was negative for antinuclear antibodies and ANCA. Cerebrospinal fluid analysis was normal. Blood culture was negative for bacteria. Genetic analysis for Factor II mutation and Factor V Leiden was negative.

She was immediately heparinized and 3 days later switched to warfarin sodium. The swelling of optic discs, visual acuity, and color vision all improved by 3 weeks. A repeat MRV 3 months later revealed satisfactory patency of intracerebral venous sinuses to warrant stopping warfarin.



Fig. 1 - Magnetic resonance venography showing thrombosis of the sagittal and transverse sinus on the right side (arrows).

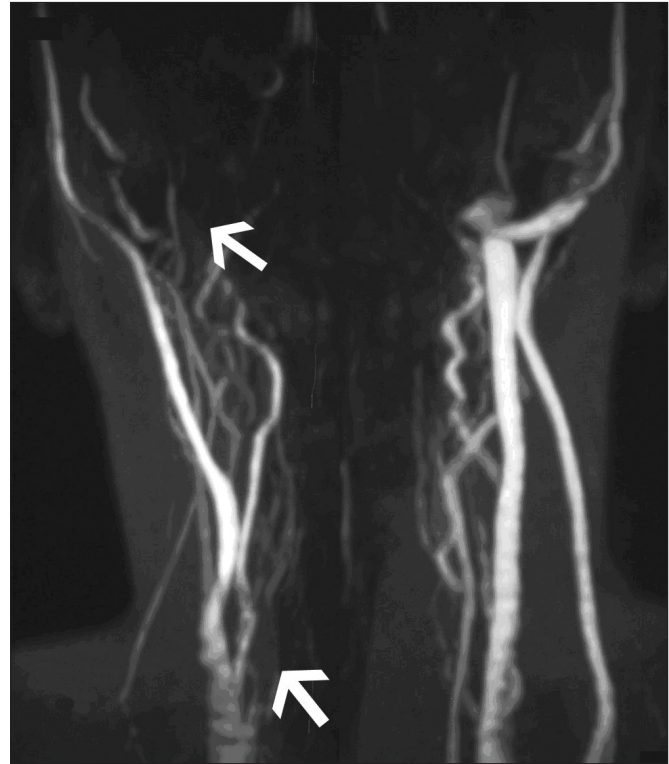


Fig. 2 - The thrombus extends down the right internal jugular vein to the root of the neck (arrows).

DISCUSSION

Cerebral vein thrombosis is a frightening event because of the severity of the clinical manifestations and the high mortality rate, estimated to be 5 to 30%. Oral contraceptives, pregnancy or the postpartum state, middle ear infections, trauma, and hypercoagulable states are risk factors for cerebral vein thrombosis (1). Systemic anticoagulant therapy in the form of heparin is safe and effective (2). Papilledema, impaired consciousness, coma, diagnostic delay, and intracerebral hemorrhage are considered poor prognostic factors (3). The excellent outcome in this patient is attributable to the early diagnosis and prompt intervention. Patients presenting with symptoms and signs as in this case are often misdiagnosed with idiopathic intracranial hypertension (or benign intracranial hypertension) with resultant poor visual outcomes. Ophthalmologists should be vigilant in obtaining appropriate imaging in cases of optic disc swelling.

Proprietary interest: None.

Reprint requests to:
Aravind R. Reddy, FRCSEd, MS, DNB
Dept. of Ophthalmology
Chancellor Wing
St James' University Hospital
Beckett Street, Leeds LS9 7TF, UK
ar@rcsed.ac.uk

REFERENCES

1. Martinelli I, Sacchi E, Landi G, Taioli E, Duca F, Mannucci PM. High risk of cerebral vein thrombosis in carriers of a prothrombin-gene mutation and in users of oral contraceptives. *N Engl J Med* 1998; 338: 1793-7.
2. Soleau SW, Schmidt R, Stevens S, Osborn A, MacDonald JD. Extensive experience with dural sinus thrombosis. *Neurosurgery* 2003; 52: 534-44.
3. de Bruijn SF, de Haan RJ, Stam J. Clinical features and prognostic factors of cerebral venous sinus thrombosis in a prospective series of 59 patients. For The Cerebral Venous Sinus Thrombosis Study Group. *J Neurol Neurosurg Psychiatry* 2001; 70: 105-8.