

# Acute-onset diplopia in a case of nephrotic syndrome

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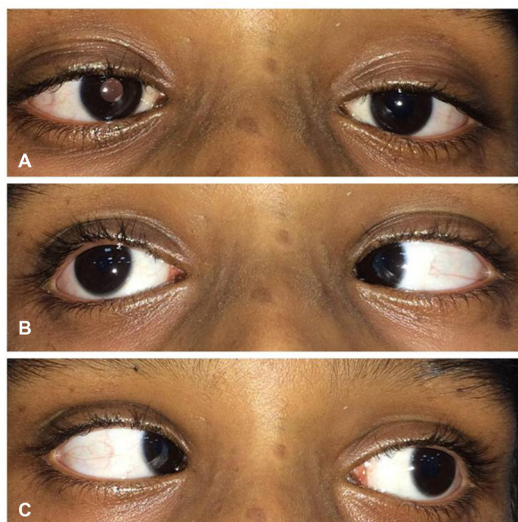
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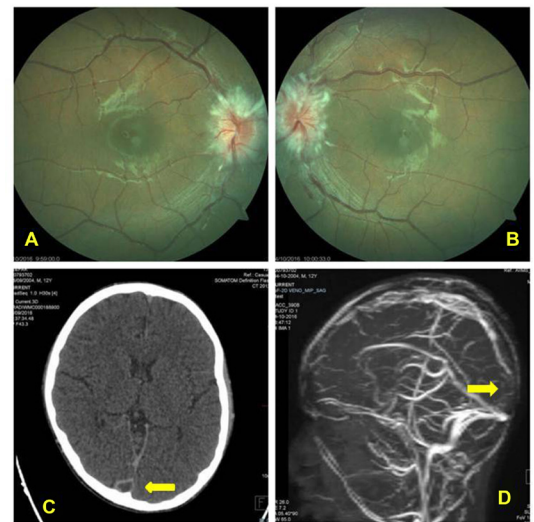
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## DESCRIPTION

A 12-year-old boy was evaluated in our emergency services for complaints of diplopia and mild generalised headache since past 4 days. The patient was a known case of frequently relapsing idiopathic nephrotic syndrome and was currently in remission since 5 days. He was normal and oriented on general physical and systemic examination. Urine microscopy had revealed only traces of protein on repeated evaluation, and serum albumin was 2.2 g/dL on presentation. Visual acuity was 6/6 in both eyes, and the pupillary reflexes were brisk. The ocular motility examination revealed an esotropia of 20 prism dioptres (figure 1A) along with limitation of the abduction movements in both eyes (figure 1B,C). However, right eye showed a greater limitation compared with left eye. Anterior segment of both the eyes were normal, but the fundus examination revealed bilateral severe established optic disc oedema (figure 2A,B). The patient was diagnosed to have papilloedema with bilateral abducens palsy as a false localising sign. An urgent contrast-enhanced computerised tomography (CECT) scan was ordered for determining the cause of raised intracranial tension (ICT). The CECT scan of the head revealed an empty delta sign wherein the contrast outlines the triangular filling defect suggestive of thrombosis of the superior sagittal sinus (figure 2C). A paediatric review was advised where the patient was started on anti-coagulant therapy (enoxaparin and heparin). There was rapid resolution of symptoms with the treatment. Magnetic resonance venography (MRV) was done 3 days later, which revealed non-opacification of the posterior part of the superior sagittal sinus



**Figure 1** (A) Esotropia in primary position and (B and C) abduction deficit in both eyes.



**Figure 2** (A, B) Papilloedema, (C) empty delta sign suggestive of sagittal sinus thromboses (arrow), (D) MRV revealing non-opacification of the posterior part superior sagittal sinus (arrow). MRV, magnetic resonance venography.

(figure 2D). At 1 month of follow-up, the patient reported complete resolution of the symptoms and attained binocular single vision in all gazes.

Sixth nerve palsy may sometimes be a false localising sign in context of raised ICT. Stretching of the nerve along its long course or compression against petrous ligament or ridge has been suggested to be the mechanism for this phenomenon in the presence of raised ICT. A bilateral sixth nerve palsy in children in the presence of papilloedema usually points towards the presence of intracranial pathology like an intracranial space occupying lesion. Thromboembolism is a serious complication of the nephrotic syndrome, which occurs due to its association with a hypercoagulable state.<sup>1</sup> The intensity of hypercoagulability is related to the degree of hypoalbuminaemia and explains why this child had a thrombotic event following very recent remission.<sup>2</sup> Until now, there is only one previous report of bilateral sixth nerve palsy as the presenting complaint of superior sagittal sinus thrombosis occurring in

## Learning points

- ▶ Sinovenous thrombosis is a rare but serious complication of nephrotic syndrome.
- ▶ The presence of a recent-onset strabismus in a patient with nephrotic syndrome should alert the physician of an underlying serious pathology.



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the context of childhood nephrotic syndrome.<sup>3</sup> In that case, however, the patient had presented with generalised oedema that was not seen in our patient.

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