

Images in Nephrology
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Pseudotumor cerebri due to proximal haemodialysis fistula

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A 60-year-old male patient presented with progressive visual loss which had lasted 4 weeks. Cyclosporin-induced renal insufficiency after cardiac transplant had made haemodialysis necessary for the previous 3 years. Shunts had been revised several times, and because of a lack of suitable arm vessels on either side, a proximal access had been formed 9 months previously, between the right subclavian artery and the ipsilateral jugular vein. Best visual performance was 20/100 on the left and 20/25 on the right side. Ophthalmoscopy showed bilateral 5+ papillary oedema (Figure 1). Except for polyneuropathy, physical findings and cranial computed tomography scan were normal. Spinal tap opening pressure was excessively elevated above 60 cm H₂O. Cerebral venous congestion as a consequence of retrograde filling of the right internal jugular vein was identified, due to the proximal arteriovenous haemodialysis fistula as the cause of intracranial

hypertension (Figure 2). This interpretation is in agreement with the pathophysiological concepts of pseudotumor cerebri [1]. Before cerebral haemodynamics could be improved, the patient's condition worsened and he died of pneumonia. The case illustrates that a proximal haemodialysis access may have a significant impact on the cerebrovascular system.

Conflict of interest statement. None declared.

References

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Fig. 1. Papillary oedema as a clinical sign of pseudotumor cerebri, resulting from cerebral venous congestion due to the proximal arteriovenous haemodialysis fistula (Figure 2).



Fig. 2. Angiography of supra-aortic vessels. The right jugular vein (white arrow) is filled by the haemodialysis fistula (black arrow) originating from the right subclavian artery.

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