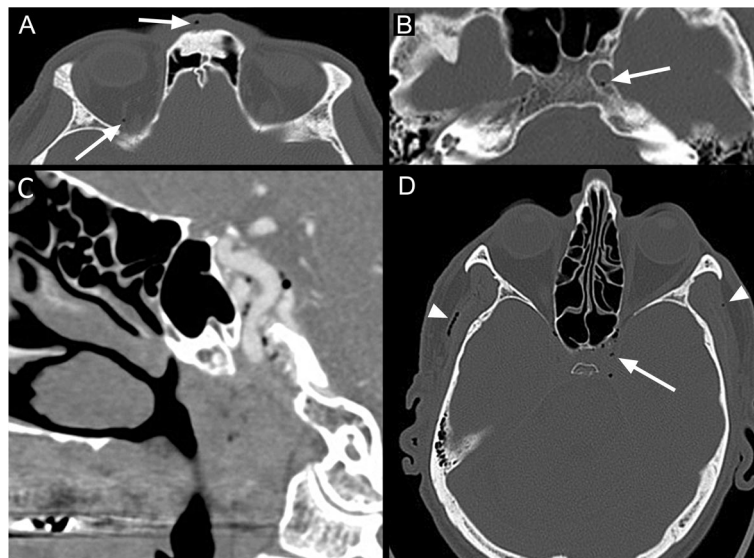


# Teaching NeuroImages: Cerebral and cervical venous air embolism

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**Figure 1** Facial and cerebral venous air embolism



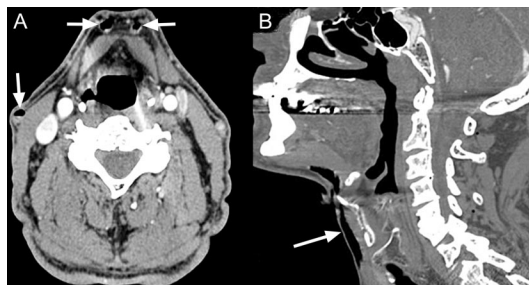
Axial (A, B, D) and sagittal (C) brain CT. Spots of low density suggest venous gas emboli in the right superior ophthalmic and angular veins (A), the left carotid canal (B), the bilateral cavernous sinus (arrows) (C, D), and the superficial temporal veins (arrowheads) (D).

A brain CT, performed because of subacute pain and weakness in the left arm of a 61-year-old man, revealed cerebral and faciocervical venous gas emboli (figures 1 and 2). A peripheral IV catheter had been placed 2 hours prior

to CT without incident of disconnection. A second CT, performed 2 hours later, showed only persistent gas in the cavernous sinus. Twelve days later, CT was normal. Thoracic echocardiogram was normal. The clinical course was consistent with neuralgic amyotrophy.

Asymptomatic cerebral venous air embolism has been described earlier after peripheral venous infusion.<sup>1</sup> Jugular valve insufficiency might explain retrograde air passage through the internal jugular valves.<sup>2</sup>

**Figure 2** Cervical venous air embolism



Axial (A) and sagittal (B) contrast-enhanced cranial CT. Areas of low density with hydro-aeric level in the bilateral anterior jugular veins (A, B) and the right external jugular vein (A) (arrows).

## AUTHOR CONTRIBUTIONS

Analysis of the data: G. Fourcade, M. Chbicheb, J. Rey, E. Nessere. Figure revision: M. Durand-Roger. Manuscript revision: D. Renard.

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Disclosure: The authors report no disclosures.

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*Neurology* 2012;78:e94

DOI 10.1212/WNL.0b013e31824f8044

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