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IMAGES IN CLINICAL MEDICINE

Cavernous Sinus Thrombosis



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A 34-YEAR-OLD WOMAN WITH A 3-YEAR HISTORY OF SYSTEMIC LUPUS ERYTHEMATOSUS was admitted to the hospital with sore throat and headache that had lasted for 3 weeks. She had been receiving cyclophosphamide for lupus nephritis for the previous 2 years. On the eighth hospital day, she reported severe headache and bilateral pain and bruising of the eyes. A day later, proptosis developed, with severe chemosis and eyelid edema, and her pupils were bilaterally non-reactive to light on examination. A preliminary diagnosis of extensive intracranial venous thrombosis was confirmed on magnetic resonance imaging. Axial T₂-weighted imaging at the level of the cavernous sinus was performed. As compared with an image from a healthy adult (Fig. 1A in the Supplementary Appendix, available with the full text of this article at www.nejm.org), the patient's image showed enlargement and heterogeneity in bilateral cavernous sinuses and in the right transverse sinus, with loss of flow void (Fig. 1B in the Supplementary Appendix). Bilateral exophthalmos, thickening of extraocular muscles, periorbital edema, and hyperintense signal compatible with inflammation of the bilateral mastoid cells (Fig. 1B in the Supplementary Appendix) were also observed. Despite treatment with heparin for 5 days, the patient died from cardiac arrest following brain edema.

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Supplemental Figure 1. Axial T₂-weighted imaging at the cavernous sinus level was performed in a healthy adult (Panel A) and the patient (Panel B). The patient had enlargement and heterogeneity bilateral cavernous sinuses (arrowheads) and in the right transverse sinus (asterisk), with loss of flow void. Bilateral exophthalmos, thickening of extraocular muscles, periorbital edema, and hyperintense signal compatible with inflammation of the bilateral mastoid cells (arrows) were also observed.