A 71-year-old woman presented with 5 days of right retroauricular pain that radiated to the retrobulbar area, with accompanying putrid nasal discharge, body chills, double vision, and swelling of the right eye. Physical examination revealed right ptosis, chemosis, a visual acuity of 20/32, limited eye movements in all directions, and hypoesthesia in the ophthalmic branch of the trigeminal nerve (Panels A and B). Contrast-enhanced magnetic resonance imaging showed a partially occlusive thrombus in the right superior ophthalmic vein (Panel C), cavernous sinus (Panel D), inferior petrosal sinus (Panel E), and internal jugular vein (Panel F) (white arrows). Moreover, there was pus in the right sphenoid sinus (red arrow in Panel D). The blood cultures and sinus aspiration material grew *Enterobacter cloacae* complex. The patient had no obvious predisposing factors for acute sinusitis and was not immunocompromised. She was treated with surgical débridement, antibiotics, and anticoagulation and recovered completely. Sinus infection can spread through direct extension or travel from mucosal veins through a valveless system of diploic, cerebral, and emissary veins to venous sinuses, the latter being the most plausible cause in the present case.

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