Teaching NeuroImages: Gradenigo syndrome

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Figure 1 Photograph of the patient shows isolated right abducens palsy

A 28-year-old woman presented with fever, double vision, and facial pain. Neurologic examination showed neck stiffness, pain in the distribution of the right trigeminal nerve, and right abducens palsy (figure 1). Tympanic membranes were normal. MRI revealed sphenoid sinusitis, basilar pachymeningitis, and clivus osteomyelitis (figure 2). CSF analysis showed pleocytosis, increased protein contents, decreased glucose levels, and positive cultures for *Staphylococcus aureus*. The triad of suppurative otitis media, pain in the distribution of the trigeminal nerve, and abducens palsy is called Gradenigo syndrome.¹ While it most often affects children, it may occur in adults and may rarely present without otitis media.² While bone compromise is usually confined to the

Figure 2 Head MRI

Contrast-enhanced T1-weighted MRI of the head shows mucosal thickening of sphenoid sinuses (arrowheads), basilar and right middle fossa pachymeningitis (small arrows), and osteomyelitis of the clivus (large arrow). While the right abducens nerve is not well visualized, it could be inferred in the axial sections (upper row) that it is entrapped throughout the Dorello channel and the cavernous sinus.

petrous apex, it may extend to sphenoid sinuses, clivus, and basal meninges.

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