

Teaching NeuroImages: Greater occipital nerve injection

A cautionary tale

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Figure 1 Lateral and frontal skull radiographs



(A) Lateral. (B) Frontal. The occipital craniectomy is demonstrated on the lateral projection (arrow) but partially obscured by skull base and partially excluded from the image. Radiographs are less expensive and involve lower radiation dose compared with CT imaging; however, skull base surgical defects may not be optimally demonstrated.

A 29-year-old man with medically refractory right-sided chronic cluster headache presented with increased attack frequency. As a bridging therapy, we considered a greater occipital nerve (GON) injection with corticosteroids and local anesthetic. Delving through his childhood medical records, it came to light he had an incidental right cerebellopontine angle dermoid excised. He could not recall the details of this; therefore, plain skull X-ray (figure 1) and head CT (figure 2) were performed. Neuroimaging is required before proceeding with GON injection if there is any suggestion of past neurosurgical intervention. There is a risk of causing loss of consciousness with GON injections into nonintact skull.^{1,2}

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Author contributions

D.Y. Wei: case report concept, wrote the initial manuscript, acquisition of data, review of manuscript. S. Connor: interpretation of X-ray and CT, created CT reconstruction, review of manuscript. P.J. Goadsby: case report concept, critical revision of manuscript for intellectual content.

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Disclosure

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Figure 2 Oblique posterior view of a volume-rendered reconstruction of the CT data



The defect within the right occipital bone at the site of the craniectomy is demonstrated.

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