

Transciliary lateral micro-orbitotomy for an orbital apex hemangioma: Technical steps

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Introduction

Orbital apex cavernous hemangiomas one of the most common benign orbital tumors in adults. Those located in the lateral aspect of the optic nerve are traditionally managed with lateral approaches such as frontorbitalzygomatic or pterional approaches to avoid crossing the nerve. Transciliary lateral microorbitotomy is a minimally-invasive alternative that provides adequate exposure of these tumor while addressing cosmesis.

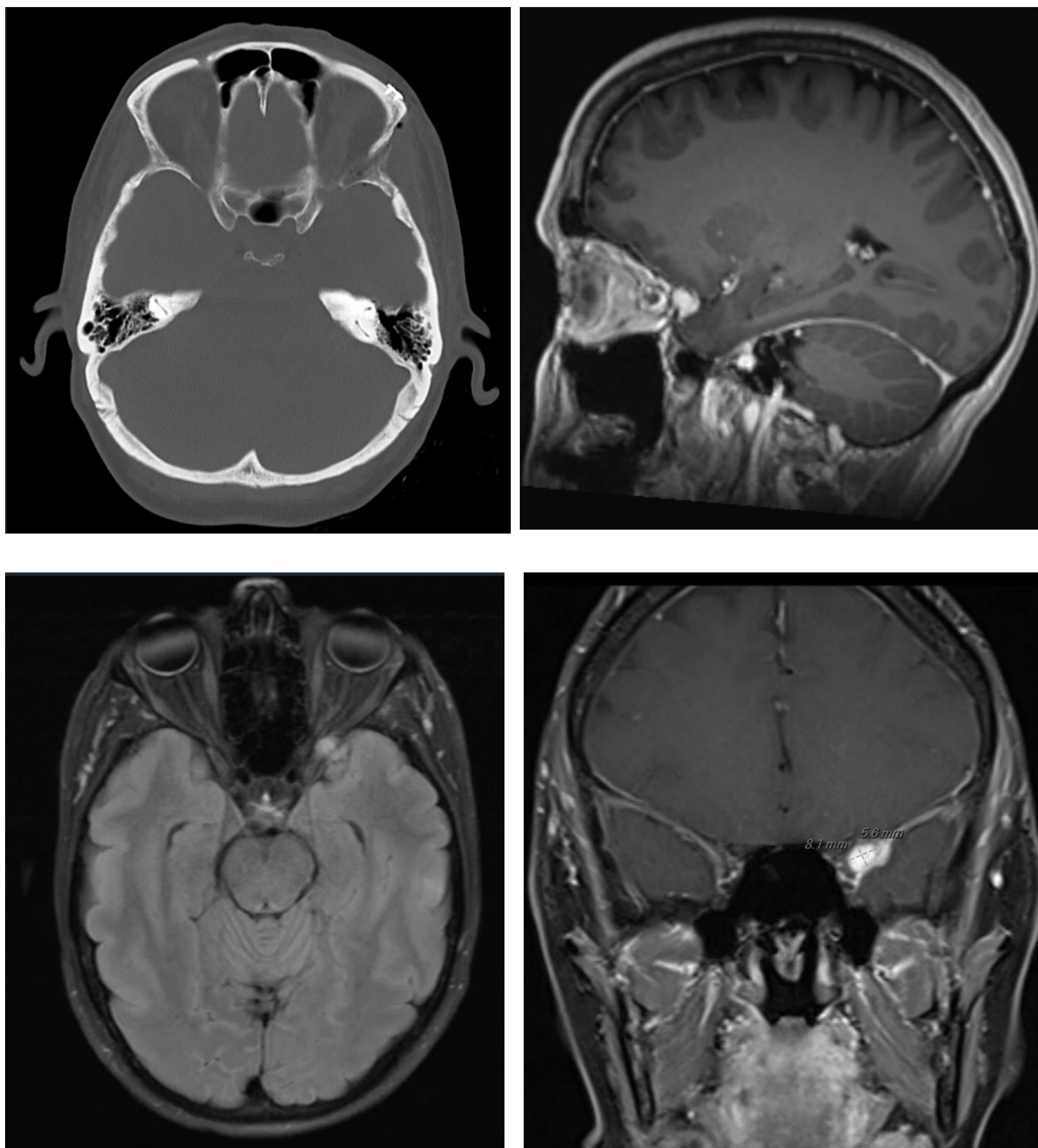


Figure 1. Preoperative CT scan and MRI.

Methods and Materials

The patient is a 57-year-old female presented with progressive left-sided blurred vision. In the examination, a visual acuity decrease was noticed but the visual field and extraocular muscle function were in normal ranges. CT and MRI showed a moderate size well-define round mass in the orbital apex, lateral to the optic nerve (Figure 1). A transciliary lateral microorbitotomy was planned given the topography of the tumor.

Results

In a supine position, a lateral transciliary incision was created. The periosteum was stripped, and a small superolateral orbital rim corridor was created. The periorbita and orbital contents were mobilized medially and the orbital apex was identified. Under microscopic guidance, the greater sphenoid wing was drilled and temporal dura was exposed. The lesion was isolated from the lateral aspect of the optic nerve sheath. The final inferolateral pedicle was ligated and the tumor was removed (Figure 2). Postoperative examination revealed improved visual acuity in that she was able to read. CT scan revealed gross total resection (Figure 3). Histopathology confirmed cavernous hemangioma.

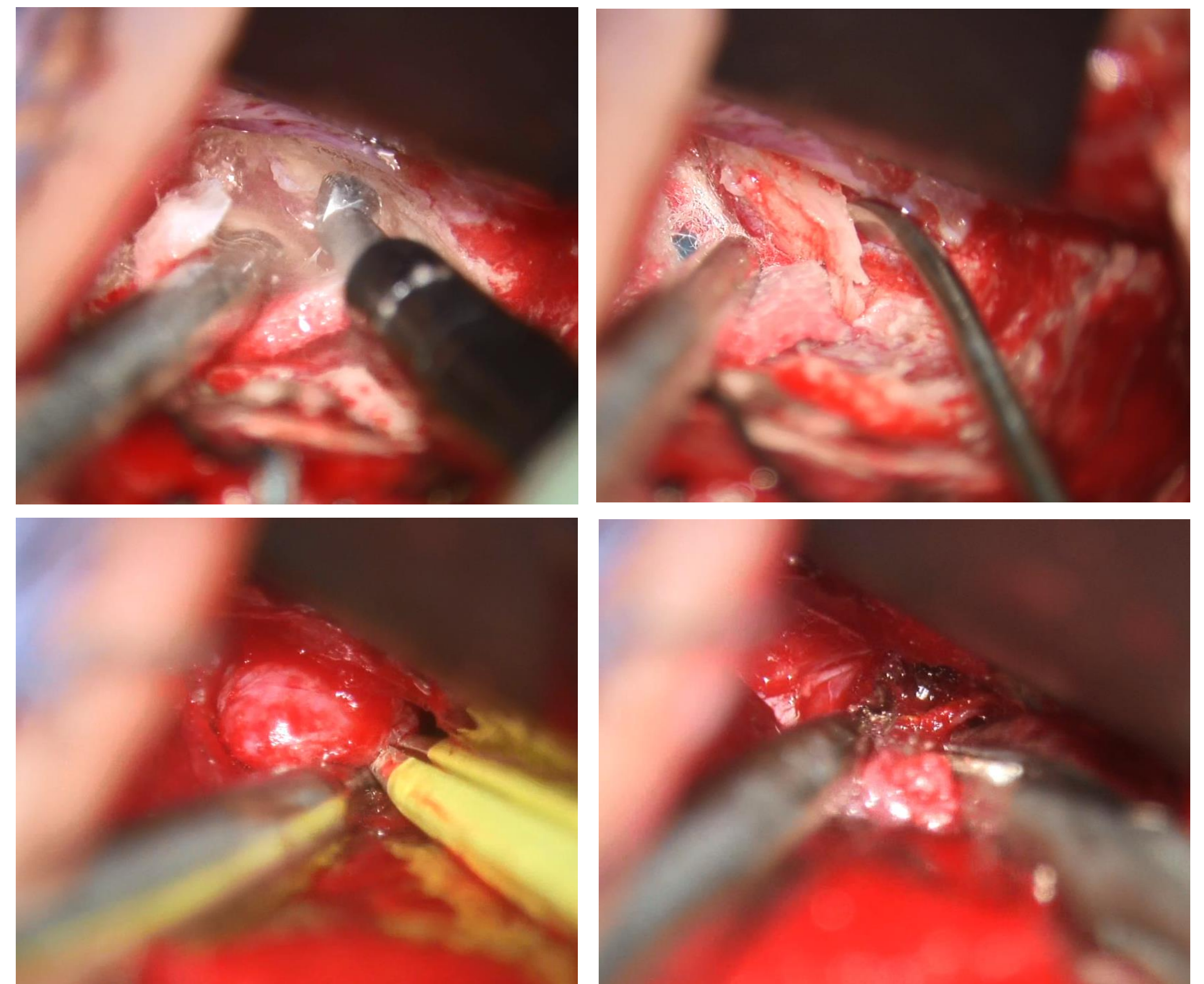


Figure 2. Intraoperative views.

Conclusions

Transciliary lateral microorbitotomy is a minimally-invasive approach that can effectively address orbital apex tumor in the lateral aspect of the optic nerve, superior orbital fissure, and anterior cavernous sinus. A multidisciplinary team consisted of an oculoplastic surgeon and a neurosurgeon, and judicious patient selection is essential to optimize outcomes.

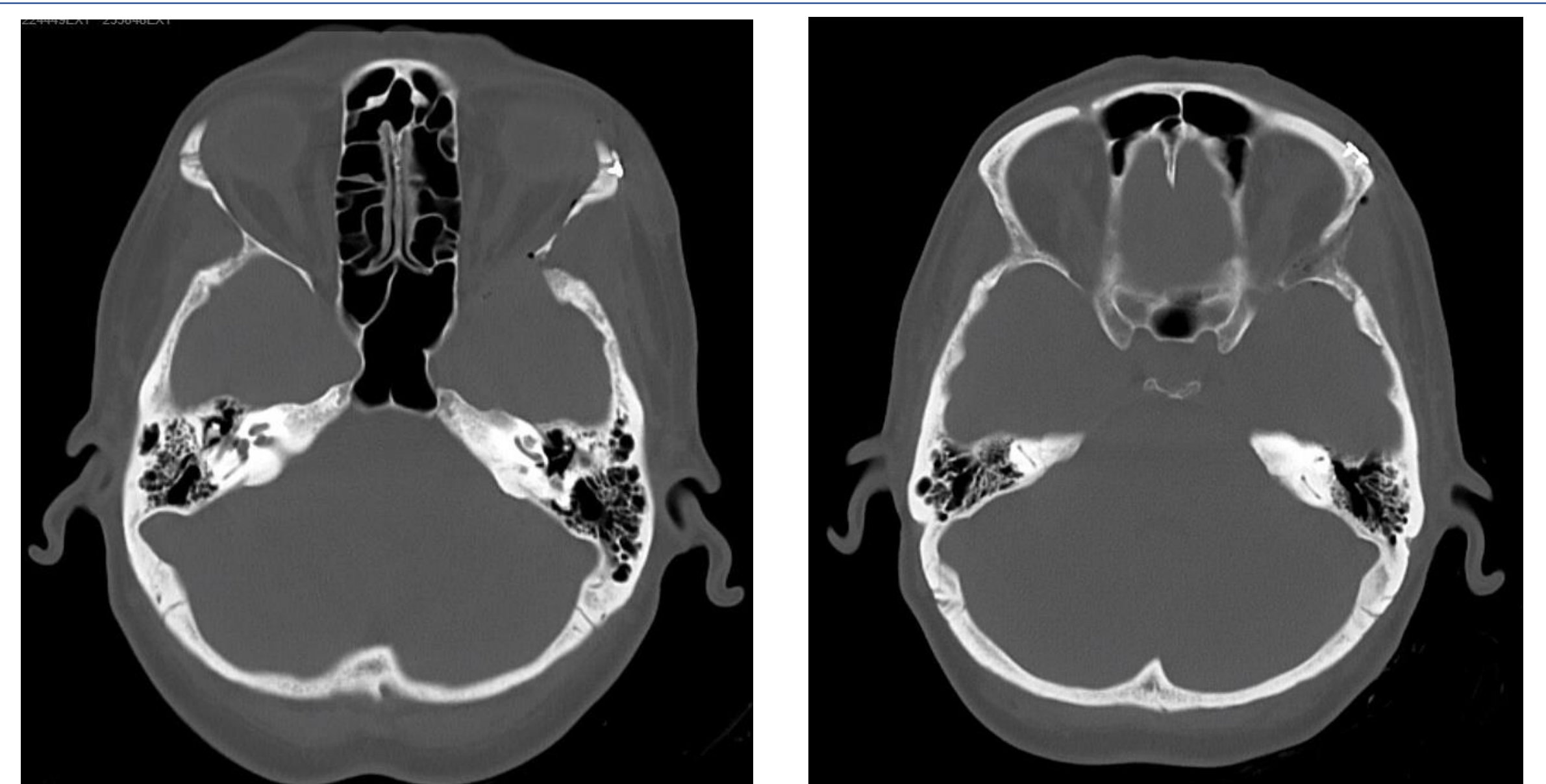


Figure 3. Just postoperative CT.

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