Primary Endoscopic Management of Apoplexy in a Giant Pituitary Adenoma

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ABSTRACT

Sellar lesions with large suprasellar extension represent a neurosurgical challenge because of their nature and anatomical complexity. The goal of the extended transphenoidal-transtuberculum approach is enlarging the transsphenoidal route superiorly and laterally allowing for a surgical adequate exposure and offering a remarkable versatility in many sellar pathologies[1,2].

We present the case of a 65-years-old man who suddenly developed blindness, right hemiparesis and decreased alertness. The initial head CT-scan (Figure 1) revealed a pituitary apoplexy of a giant adenoma associated with hydrocephalus resulting from obstruction of the foramen of Monro. The video shows a complete lesion removal through the sole endoscopic approach, with opening of the dural layer of sphenoidal plane and successful decompression of the third ventricle (Figure 2). Visual and functional improvement occurred in the immediate postoperative course. No lumbar drain has been used.

This case demonstrates how the endoscopic approach can be attempted as a first and possibly stand-alone option for the surgical management of large sellar-suprasellar lesions. The endoscopic route is not associated with high rates of major complications and is safe when performed by experienced surgeons. In fact, it guarantees an enhanced control of the vascular feeders reaching the tumor from the anterior and middle fossa, and results in a satisfactory manipulation of lesions invaginating into the floor of the third ventricle. A careful preoperative assessment of Knosp grade, tumor volume, hemorrhagic components, suprasellar extension, and sphenoid sinus invasion should always guide the management plan, and suggest a staged or a combined (with tranventricular or pterional approach) removal in particularly challenging cases[3,4].

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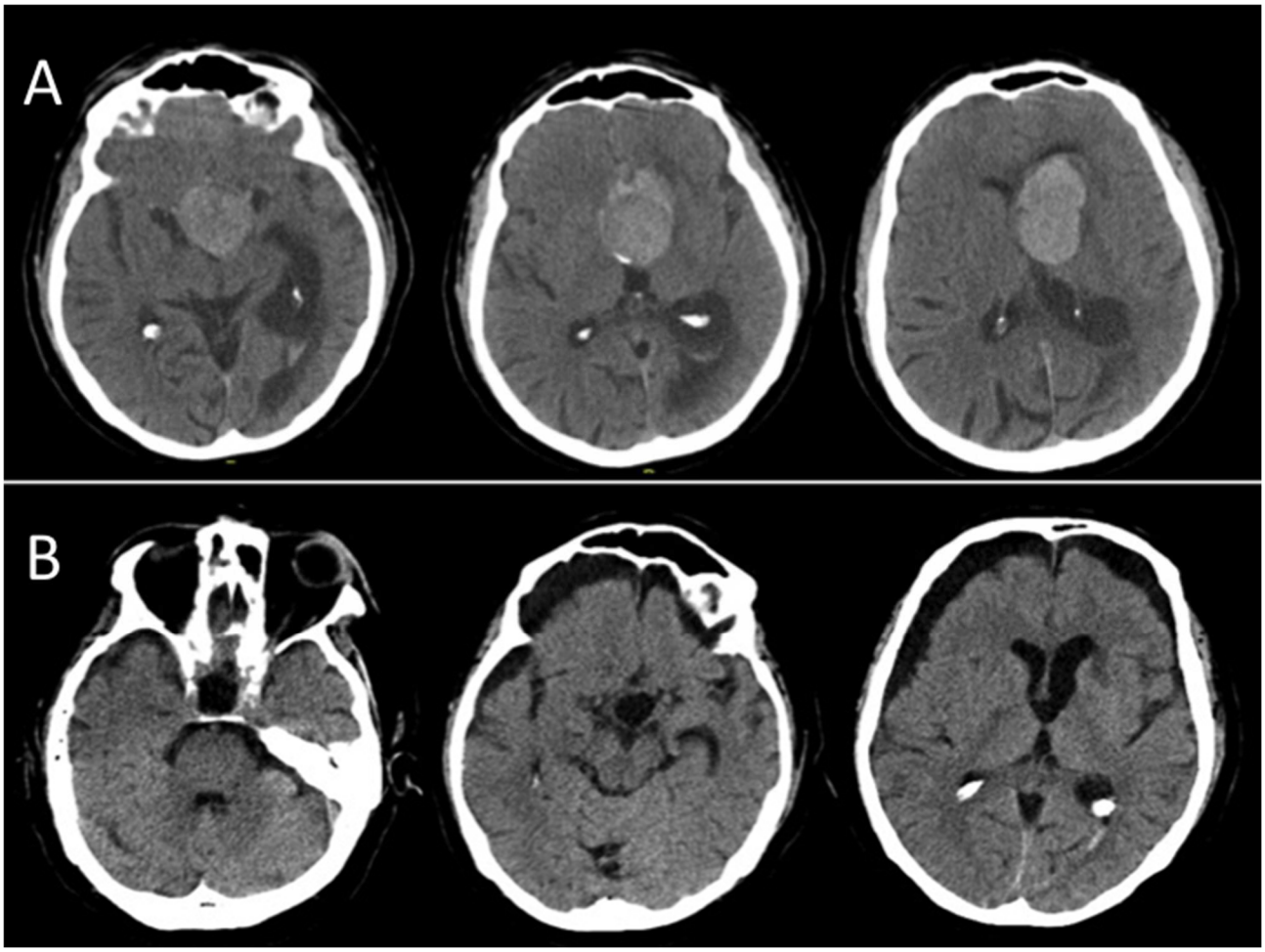

Figure 1. CT-scan showing pituitary apoplexy of a giant adenoma associated with hydrocephalus resulting from obstruction of the foramen of Monro

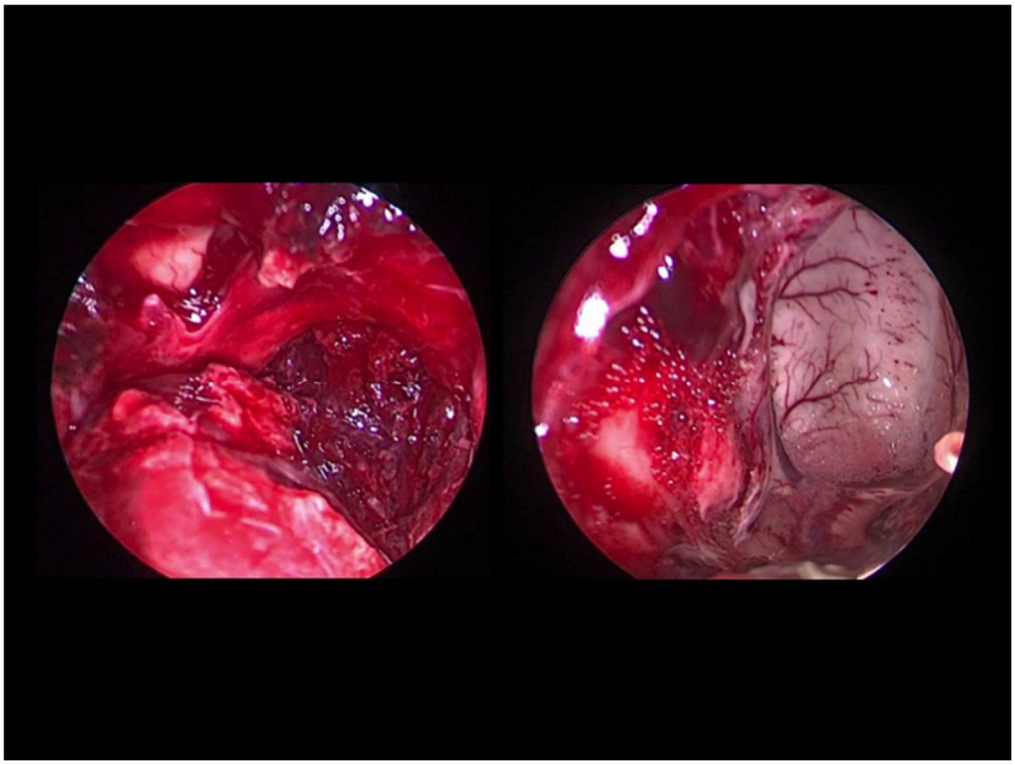

Figure 2. Caption from the video showing a complete lesion removal through the sole endoscopic approach, with opening of the dural layer of sphenoidal plane and successful decompression of the third ventricle