## Surgical Indications in Pituitary Apoplexy

*To the Editor:*

We read with great interest the article by Hidiroglu and associates [1]. We would like to add some comments in relation to this article.

Pituitary apoplexy is a well-described clinical syndrome associated with sudden-onset headache, and often associated with vomiting, visual deterioration, ophthalmoplegia, fever, consciousness disturbance, signs of meningeal irritation, and some degree of pituitary deficiency [2]. Not every patient with pituitary apoplexy needs surgical therapy because spontaneous recovery is possible. Although conservative treatment is an alternative in the presence of isolated ocular palsy, it must be principally emphasized that the most important clue in deciding the type of treatment to use, whether conservative or surgical, is visual impairment or a diminished level of consciousness [3,4]. The presented patient had bilateral third nerve palsy only and the authors did not mention the visual acuity of the patient. Early surgery can be suggested for histopathological diagnosis and to relieve neurological symptoms in some patients like in the presented case [5].

Pituitary apoplexy occurs as a result of infarction, hemorrhage, or a combination of hemorrhagic infarct of a pituitary tumor. The presentation depends on tumor expansion, extravasation of the blood to the subarachnoid space, and endocrinopathy [6]. Identifying the type of pathology is also important in deciding the type of treatment. This knowledge is important for estimating the course of the disease. We did not see any blood density in the sella or perisellar subarachnoid cisterns in the contrast enhanced computerized tomography in Figure 1 in the article by Hidiroglu and associates. We think that the intrasellar tumor expansion, due to infarction of an existing pituitary tumor, was responsible for the clinical rather than the major intratumoral bleeding, but there was no information about the type of pathology in the reported case. Semple and associates [7] suggested that those patients with ischemic necrosis alone may have a more benign, less severe clinical picture, and a better outcome when compared with patients with hemorrhagic necrosis or hemorrhage alone. In the case of rapid growth of the pituitary tumor, the trabecular artery may be compressed at the edge of the diaphragma sella or increased blood supply may cause vascular insufficiency of the tumor [3].

The computerized tomography in Figure 2 in the original article seems to have been performed preoperatively because it does not indicate any postoperative change, and this image is not clear enough to see the chiasmatic compression. The best way to observe the chiasmatic compression is not via the axial slice but to use a coronal or sagittal slice.

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## *Reply*

*To the Editor:*

We thank Drs Ayberk and Ozveren for their comments [1] on our report [2]. Pituitary apoplexy is rare after open heart surgery, and most cardiovascular surgeons may not encounter such a case during their entire practice. Therefore, the decision for surgical intervention definitely requires multidisciplinary approach. This case as well was consulted with neurology and neurosurgery departments, and a joint decision was given for early intervention according to the patients' physical examination findings and computed tomographic (CT) scan results.

The CT scan images are less to discuss for us since we expressed them as radiologists reported. The image in Figures 1 and 2 were taken before the neurosurgical intervention, showing the intracellular location of the solid mass. The relatively low clarity of the image belongs to the technical aspects of the single slice CT. Neither intratumoral bleeding nor infarction of pituitary tumor was observed in the CT image; therefore, we could not name the underlying pathology. We also checked again with radiologists about these images, concluding that hemorrhage or infarction differentiation could not be made with this single slice CT scan image belonging to a previous technology. Magnetic resonance imaging could of course yield better differentiation, but we were reluctant to perform it at a very early postoperative stage, and because the CT image was conclusive for the immediate management, we did not delay the intervention with further investigations.

Again we thank Drs Ayberk and Ozveren for their informative comments on this rare and, at least for our cardiovascular surgery community, "extraterrestrial" case.

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