

Reply to the Letter to the Editor “Visual outcomes after pituitary surgery”

Sven Berkmann^a, Javier Fandino^a, Beat Müller^b, Karl F. Kothbauer^c, Christoph Henzen^d, Hans Landolt^d

^a Department of Neurosurgery, Kantonsspital Aarau, Switzerland

^b Medical University Clinic, Kantonsspital Aarau, Switzerland

^c Division of Neurosurgery, Luzerner Kantonsspital, Luzern, Switzerland

^d Department of Internal Medicine, Luzerner Kantonsspital, Luzern, Switzerland

We thank Panos et al. for their comments on our paper “Pituitary surgery: experience from a large network in Central Switzerland” [1], and for sharing their experience of visual outcomes after transsphenoidal surgery in 23 patients. Nevertheless, we would like to comment on a few points raised by the authors.

In our study we detected postoperative improvement of visual acuity and visual field deficits in 89% and 87% of the 182 patients, respectively. Intraoperative magnetic resonance imaging (iMRI) guidance was used in 115 (63%) patients. As a matter of fact we did not “suggest that the use of iMRI was the crucial factor for achieving very favourable clinical outcomes”, because the study design was not appropriate for such a conclusion; however, the use of iMRI *may* have contributed to the favourable outcome. Furthermore, the authors suggest a statistical comparison of visual outcomes between patients treated with and without iMRI guidance to establish iMRI as a standard technique. This calls for randomisation or for a cohort study in which all the other possible predictors for visual outcome are statistically adjusted.

Withdrawal of iMRI guidance for randomisation or formation of a cohort may be questionable, for obviously there are not only ophthalmological advantages of iMRI in transsphenoidal surgery. Most of all – as also shown in our previous studies [1–3] – it leads to a significant increase in gross total resection rates. In a study [3] focusing on early visual outcome after iMRI-guided transsphenoidal surgery we were able to conclude that iMRI findings correlate with the prognosis of visual deficits. Improvement of visual acuity was seen in a similarly high percentage (85%) of patients and decompression of the optic chiasm depicted with iMRI was a significant predictor (positive predictive value 0.96, 95% confidence interval 0.79–0.99) for postoperative recovery of decreased visual acuity. We agree that, due to different methods in assessing ophthalmological function, as well as variable grades of severity and duration of deficits, comparisons of the various studies in the literature may be difficult. Recovery rates of between 50% and 90% are commonly described [4–8]; however, for iMRI-guided

transsphenoidal surgery, recovery rates of 95%–100% have been reported [9–12]. The 30% recovery rate of patients with visual acuity deficits described by Panos et al. seems relatively low. It would certainly be interesting to have further information on the histological tumour diagnosis, tumour size, presence of invasive growth, duration of symptoms and follow-up, and extent of resection. Only with this additional information may the authors’ results be appropriately judged.

Correspondence: Sven Berkmann, MD, Department of Neurosurgery, Kantonsspital Aarau, CH-5001 Aarau, Switzerland, [sven.berkmann\[at\]ksa.ch](mailto:sven.berkmann[at]ksa.ch)

Letter to the Editor:

<http://www.smw.ch/content/smw-2013-13802/>

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