Editorial board comments

Comments on the article: Functionally tailored transcortical approach of deep-seated lesions: an alternative to the transulcal approach? A technical case report, by D. Bresson, C. Madadaki, I. Poisson, C. Habas and E. Mandonnet

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The authors report a functionally transcortical approach of deep-seated lesions as an alternative to the transulcal approach. The originality of the concept proposed by the authors is questionable. We cannot establish a functional difference between a transulcal or transcortical approach. The sulcal approach permits to penetrate the white matter at a shorter distance, based on a probabilistic knowledge. From a “cortical” point of view, the damage is similar in comparison to a cortical approach.

During the post-operative course, the patient noted right-sided paraesthesia. This means that the resection was very close to the sensory pathways and it was recommended to perform a mapping of the white matter in the awake patient.

The use of DTI is also questionable and does not constitute a reliable landmark. In an awake patient, it was most likely to reach the sensory fibers with an optimal oncological result. There is an inconsistency in the proposed “concept”. The authors rely on functional mapping for the cortex, but (in part) on DTI for the white matter. Therefore, the authors have underestimated two possible complications in relation to space cognition (which was not evaluated in the preoperative course) as well as to optic pathways (parietal optic radiation) with a perioperative mapping. Retrospectively, the histology (anaplastic ependymoma) in fact demonstrated that the resection was a major prognostic factor, which may be limited by a lack of sub-cortical monitoring.

In the present case, the authors do not demonstrate any concept (“this concept should be validated on a larger patient series”). Awake surgery is already the standard of care with an abundant literature. Similar transcortical approaches are often performed to reach deep-seated lesions.