Insular Glioma Surgery – Complication Avoidance versus Radicality

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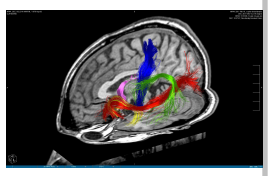
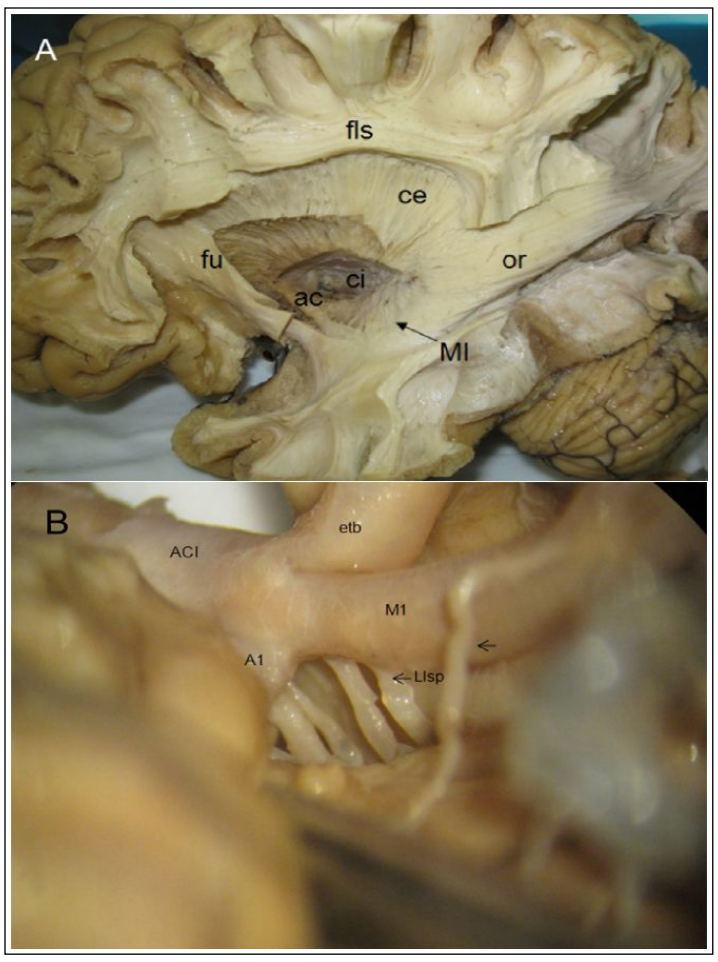


Introduction

Insular glioma resection can pose technical difficulties, handling MCA branches, trunks and lenticulostriate perforators. After managing this initial part of surgery and partial devascularization of the tumour the decision on how deep to proceed towards putamen is crucial.

Methods

The monitoring of MEP is mandatory, navigation in combination with ultrasound is helpful, but in some instances misleading. In cadaver laboratory we performed dissection of 10 cerebral hemispheres including Klingler´s technique.



Results

Our experience since 2007 till 6/2012 amounts to 15 patients, 5 surgeries we performed in two phases due to significant residual tumour, during this period we added 4 resurgeries for late reccurence. Three gliomas were GBM, 2 of them radically resected, one resection was subtotal - leaving medial remnant of the tumour. In T2W hyperintense gliomas with no enhancement we archieved an average of **86% radicality** according to volumetry (cm3). We were surprised with high occurence of anaplastic astrocytoma (5/12) and low grade glioma with high proliferation index Ki67 (5/12) with the need of adjuvant oncological treatement. Till now we **did not** record **any permanent neurological deficit**.

Conclusions

Within non-enhancing gliomas located in insula exists a high proportion of anaplastic astrocytoma and LGG with high Ki67 index. As the main factors to achieve satisfactory results in this area we believe in rigorous microsurgery, perfect knowledge of anatomy and electrofysiological monitoring (continuous MEP in the critical phase of surgery).

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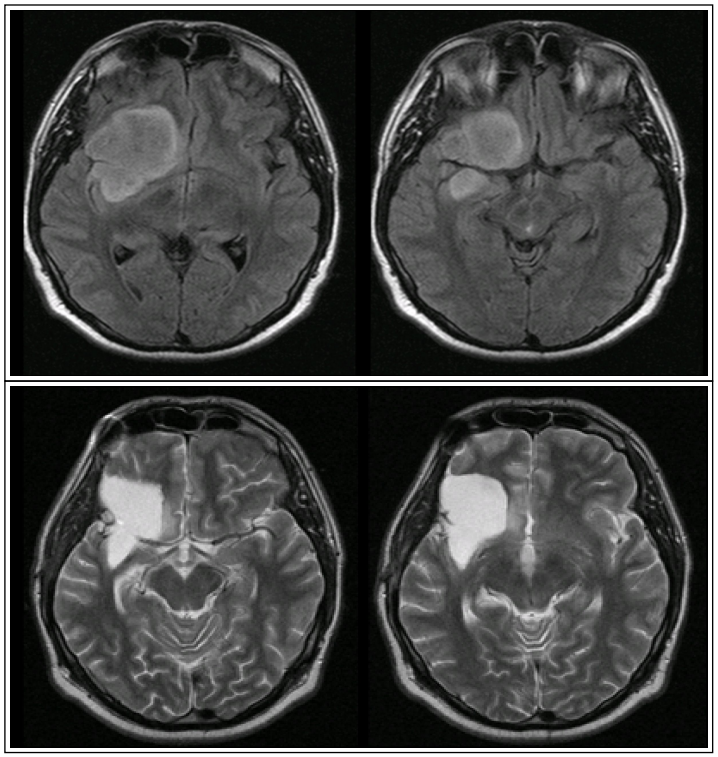

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