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SUPRATOTAL RESECTION – AN EMERGING CONCEPT OF GLIOMABLASTOMA MULTIFORME SURGERY – SYSTEMATIC REVIEW AND META-ANALYSIS

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Abstract

The severe neurological tumor known as glioblastoma (GBM), also referred to as a grade IV astrocytoma, is rapidly progressive and debilitating. Supratotal resection (SpTR) is an emerging concept within glioma surgery, which aims to achieve a more extensive resection of the tumor than is possible with conventional techniques. We performed a language-independent search of PubMed, Scopus, and Cochrane CENTRAL to identify all available literature up to August 2022 of patients undergoing SpTR assessing survival outcomes in comparison to other surgical modalities. After screening for exclusion, a total of 13 studies, all retrospective in design, were identified and included in our meta-analysis. SpTR was associated with significantly increased overall survival (HR=0.77, [0.71-0.84]; $p<0.01$, $I^2=96\%$) and progression-free survival (HR=0.2, [0.07-0.56]; $p=0.002$, $I^2=88\%$).

Keywords: Astrocytoma; Glioblastoma; Supra complete; Supramarginal resection; Supratotal resection.

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