Surgical treatment of glioblastoma multiforme localized in the motor area of the brain using the technique of cortical electrostimulation.

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Abstract

AIM: Glioblastoma multiforme in the motor area is the surgical challenge because of the need for more radical resection in order to extend the life of the patient, and the risk that radicalism could lead to additional neurological deficit. MATERIAL and METHODS: We present series of 26 patients with glioblastoma multiforme localized in and around the motor area, who were hospitalized from October 2004 to February 2009. During all operations, we conducted electrostimulation display area of the brain, to the anatomical location of M1 segment of the motor cortex.

RESULTS: Distance of the central sulcus in relation to the coronary suture, measured by magnetic resonance imaging (MRI) was 18.38 mm ± 9.564 mm. The volume of electricity required for a motor response was mean 8.79 ± 1.484 mA, with increasing distance from the coronary suture the amperage required to explicit motor responses decreased. The difference (mm) between the distance from the coronary suture measured using MRI and distances measured electrostimulation smaller and power consumption was less (F = 13.285, p < 0.01).

CONCLUSION: The method of cortical cerebral cortex electrostimulation is simple and safe method and a binding protocol to the patient safe operation glioblastoma multiforme localized in the motor area of the brain.


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