Medulla oblongata glioblastoma

Medulla oblongata glioblastoma is considered exceptional. An extensive review of well described cases as well as the brain gliomas' series yielded only four cases of histologically documented GBM of medulla oblongata [1) 2) 3) 4)].

Perhaps due to this rarity, we are not aware of any previous reports addressing the resection of these tumors or their clinical outcomes.

In this surgical video, we present a 43-year-old man with a 1-month history of left-sided paresthesia. The paresthesia initiated in the left hand, along with weakness and reduced fine motor control, and then spread to the entire left side of the body. He had recent weight loss, imbalance, difficulty in swallowing, and hoarseness in his voice. He also had a diminished gag reflex, and significant atrophy of the right side of the tongue with an accompanying deviation of the uvula and fasciculations of the tongue. MRI showed an infiltrative expansile mass within the medulla with peripheral enhancement and central necrosis. In T2/FLAIR sequences, a hyperintense signal extended superiorly into the left inferior aspect of the pons and left inferior cerebellar peduncle and inferiorly into the upper cervical cord.

The decision was made to proceed with surgical resection. The patient underwent a midline suboccipital craniotomy with C1 laminectomy for surgical resection of this infiltrative expansile intrinsic mass in the medulla oblongata, with concurrent monitoring of motor and somatosensory evoked potentials and monitoring of lower cranial nerves IX, X, XI, and XII. A gross-total resection of the enhancing portion of the tumor was performed, along with a subtotal resection of the nonenhancing portion. The surgery and postoperative course were uneventful. Histopathology revealed a grade IV astrocytoma. The patient received radiation therapy.

In this surgical video, Sayyahmelli et al. demonstrated important steps for the microsurgical resection of this challenging glioblastoma multiforme of the medulla oblongata [5)].

<html><iframe width="560" height="315" src="https://www.youtube.com/embed/QHbOVxdxbeU" frameborder="0" allow="accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe></html>

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