Microsurgical Resection After Failed Gamma Knife Radiosurgery of Papillary Tumor of the Pineal Gland

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Primary papillary tumors of the pineal region are rare entities with distinct histopathologic characteristics. The most common surgical approaches include the supracerebellar infratentorial corridor or the occipital interhemispheric approach. Gamma knife radiosurgery (GKRS) is an acceptable treatment modality for parenchymal tumors of the pineal gland and often is used as a primary treatment modality for asymptomatic and indolent lesions and as an adjunct to surgical resection. In this presentation, we describe the surgical nuances of posterior interhemispheric approach in an elderly man with a previously failed empirical GKRS. Intraoperatively, the tumor was mostly avascular, presumed to be due to previous GKRS; however, a good tumor–brain interface allowed a gross total resection of the mass.

Histopathologic examination of the mass was consistent with primary papillary tumors of the pineal region. Postoperative course was uneventful, and long-term follow up showed no signs of tumor recurrence. The (Video 1) discusses radiologic findings, clinicopathologic correlates, and emphasizes key microsurgical techniques, including the significance of patient positioning and incision type for meticulous resection of pineal tumors.

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