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Invited Commentary

Pineal Tumors: A Pathological Challenge

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It is an honor for having been invited to write a commentary to the published paper titled, "Recurrent Papillary Tumour of Pineal Region Misdiagnosed as Pineocytoma 9 Years Ago: A Case Report." The current paper explains the pathological challenge of pineal tumors which would affect treatment as well. Pathological classification of brain tumors has evolved during the last decades. Introduction of bio-molecular markers and new modalities made significant differentiations in pathologies that modified their treatment and prognosis.

Pineal tumors are challenging type of brain lesions according to their anatomy, surgical approaches, and pathologic subtypes. Considering pathology, the most common tumors are pineal parenchymal tumors and germ cell tumors.[1] Pineal parenchymal tumors are divided into pineocytoma, pineal parenchymal tumor with intermediate differentiation, and pineoblastoma. Precise differential diagnosis is critical for treatment planning.

Papillary tumor of the pineal region (PTPR) is a rare neuro-epithelial tumor categorized as Grade II or Grade III lesions and resembles a Grade I pineocytoma. Therefore, immunohistochemistry is essential to differentiate them. Unlike germ cell tumors of pineal region, surgery seems to be the optimal primary treatment for PTPR to achieve cytoreduction followed by adjuvant therapies. The current paper emphasizes the role of pathological diagnosis in a multidisciplinary management of brain tumors. Surgical approach to intracranial lesions carries a high risk of various complications. Hence, there is a general requirement for risk assessments to consider all possible treatment planning.

References

1. Hirato J, Nakazato Y. Pathology of pineal region tumors. J Neurooncol 2001;54:239-49.

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