

Primary Melanocytic Tumors of the Central Nervous System: A Clinico-Pathological Study of Seven Cases

Authors : Sushila Jaiswal, Awadhesh Kumar Jaiswal

Abstract : Background: Primary melanocytic tumors of the central nervous system (CNS) are uncommon lesions and arise from the melanocytes located within the leptomeninges. Aim and objective: The aim of the study was to evaluate the clinical details, histomorphology of the primary melanocytic tumor of CNS. Method: The study was performed by the retrospective review of the case records of the primary melanocytic tumors of CNS diagnosed in our department. The formalin-fixed, paraffin embedded tissue blocks and tissue sections were retrieved and reviewed. Results: Seven cases (6 males, 1 female; age range- 16-40 years; mean age- 27 years) of primary melanocytic tumors of CNS were retrieved over last seven years. The tumor was intracranial (n=5; frontal - 1 case, parietal - 1 case, cerebello-pontine angle- 1 case, occipital -1 case, foramen magnum-1 case) and intra spinal (n=2; cervical - 2 cases). All patients presented with the neurological deficits related to the location of the tumor. Four cases were malignant melanoma; two were melanocytoma of intermediate grade and remaining one was melanocytoma. On histopathology, melanocytoma and melanoma both displayed sheets of well-differentiated melanocytes having round to oval nuclei with finely dispersed chromatin, occasional single eosinophilic nucleoli and a moderate amount of cytoplasm with abundant granular melanin pigment. The absence of mitosis and macronucleoli was noticed in melanocytoma while melanoma showed frequent mitosis and macronucleoli. On immunohistochemistry, both showed diffuse strong HMB45 and S-100 immunopositivity. Conclusion: Primary melanocytic tumors of CNS are rare and predominantly seen in males. It is important to differentiate melanoma from melanocytoma as prognosis of later is good.

Keywords : melanocytoma, melanoma, brain tumor, melanin

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