eTABLE 1

Characteristics of melanotic tumors of the central nervous system

Tumor	Morphology	Location	Histopathology	Treatment	Prognosis
Circumscribed					
Melanocytoma	Grade 1[11]	Spinal region (cervical, thoracic); posterior fossa; Meckel's cave[14]	Composed of monomorphic spindle or epithelioid cells arranged in a fascicled or nested growth pattern; variable amounts of melanin pigment in the cytoplasm. Nucleoli are prominent and oval-shaped without pleomorphism. Very low mitotic activity along with absence of necrosis or hemorrhage[4]	Complete resection if possible. Radiation therapy in case of incomplete resection or recurrence[14]	Frequent local recurrence, esp. in case of incomplete resection; malignant transformation rare [14]
Melanoma	Grade 3[11]	Along the neuroaxis, slight predilection for spinal cord and posterior fossa[14]	Similar to melanocytoma but with higher cell density and more anaplastic, pleiomorphic cells. Hemorrhage or coagulative necrosis may be seen[6]	Complete resection if possible, postoperative radiotherapy is recommended, usefulness of chemotherapy is not established[14]	Distant metastases rare; better prognosis in case of complete resection compared with CNS melanoma metastasis[14]
Diffuse					
Melanocytosis	Grade 0[11]	Supra- and/or infratentorial/spinal leptomeninges; most frequent in/near cerebellum, pons, medulla, and temporal lobes[14]	Relatively small melanocytes that contain moderate amounts of cytoplasm. Possess short processes and may be spindled, round, oval, or cuboidal.[6]	Efficacy of chemotherapy and radiotherapy is not established. Chemotherapy might show some benefit.[14]	Poor prognosis, once symptomatic[14]
Melanomatosis	Grade 3[11]	Supra- and/or infratentorial/spinal leptomeninges, and/or superficial brain parenchyma[14]	Polygonal neoplastic cells with cytoplasmic pigment and nuclei containing prominent nucleoli. Can mimic brain metastasis from a malignant melanoma.[15]	Not established.[14]	Dismal prognosis[14]

Adapted from Küsters-Vandevelde et. al[14]