Commentary

In the pediatric population, oligodendrogliomas constitute around 2% of all primary intracranial tumors. Brain stem oligodendrogliomas are very uncommon and only limited information is available in the literature. It is difficult to establish the incidence of true intrinsic brain stem oligodendrogliomas in the pediatric population considering its rarity. Alvarez *et al.* in an analysis of 1593 oligodendrogliomas and 307 brain stem mass lesions reported in the literature from 1933 to 1996 had 56 posterior fossa oligodendrogliomas. Of these 56, only six could be considered as intrinsic brain stem tumors, 10 others were exophytic tumors in the fourth ventricle and the remaining 40 were located in the posterior fossa with infiltration of the cerebellum and brain stem accompanied by wide dissemination along the subependymal and subarachnoid pathways.[1] As the authors in the present communication[2] have indicated, it is at times difficult to determine the site of the tumor origin as most of the reports were from the pre-magnetic resonance imaging days. Of all the brain stem locations, pons and medulla appear to be the most common locations. The tumor often invades the midbrain, with rostral spread, as demonstrated in prior reports[3] and in the present report.[2] Exophytic masses tend to arise from the dorsal brain stem in the region of the tegmentum and expand into the fourth ventricle. Infiltration along the white matter tracts and spread along the cerebrospinal fluid (CSF) often indicated that these lesions are more aggressive than once thought in the past. The tumors have a propensity to spread along the subarachnoid pathways.[4]

Unlike their supratentorial counterparts, these tumors manifest with a relatively short clinical course, possibly due to their location. Being in close proximity to the major long tracts and nuclei of the cranial nerves and the CSF pathways, these tumors present earlier in their clinical course. Additionally, some believe that posterior fossa oligodendrogliomas biologically behave more aggressively, accounting for the earlier presentation. The tumors have been reported to be more frequently cystic and are less calcified. Surgical biopsy and, in appropriate cases, microsurgical excision, has been advocated. Radiation therapy has been used in the postoperative period to slow the recurrence of the tumor. Leptomeningeal metastasis is often observed in the follow-up period. The overall prognosis may not be as bleak as suggested in the previous reports.[1,2]

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