Posterior fossa teratoma

A posterior fossa teratoma is a rare occurrence.

The histopathological differentiation between teratoma and dermoid cyst is very valuable for ruling out the presence of immature/malignant or germinomatous components that would require further adjuvant therapies. Posterior fossa teratoma mimicking posterior fossa dermoid cyst has been described [1].

Case reports

2014

Congenital orbital teratoma is a rare condition which presents as marked proptosis of eyeball in a newborn. It is rapidly progressive with secondary damage to eyeball due to pressure effect. This case presented is of interest due to radiological features and rarity of this tumor extending into posterior fossa [2].

A case of a mature teratoma with abnormal +21 trisomy in tumor karyotype ocurring in a non-Down syndrome(DS) infant. Additionally, the evidence for the contribution of chromosome 21 trisomy in this neoplasia are briefly reviewed. The 6-month-old male baby presented with a posterior fossa tumor. Histological evaluation of tumor specimen showed a mature teratoma composed of fully differentiated ectodermal, mesodermal and endodermal components. Although somatic karyotyping of the index case was normal, composite tumor karyotype depicted 47,XY,+21[6]/46,XY[6]. Besides previous reports of children with DS and intracranial teratomas, this is the first report to describe the occurrence of an isolated chromosome 21 trisomy within the tumor of a non-DS child. The participation of chromosome 21 in this rare pediatric tumor, either somatic or restricted to tumor specimen,may deserve special interest and further investigation [3].

An 11-week-old baby was brought to the paediatric emergency department by his mother with a 2-day history of inconsolable crying. On examination, clinical features of macrocephaly, separated sutures and 'sunsetting' of the eyes were noted. Abnormal head circumference measurements had been obtained on several occasions since birth, but were not acted on contrary to local guidance. During the emergency admission, an urgent CT scan revealed a large posterior fossa tumour consistent with a teratoma causing severe obstructive hydrocephalus. Following referral to a neurosurgical centre, emergency ventricular drainage and debulking surgery were performed, unfortunately with no option for cure. Distress to mother and baby could have been reduced with a more timely diagnosis [4].

An infant who had begun vomiting frequently at the age of 12 days and had been admitted to a hospital at the age of 18 days with continued vomiting, increased head circumference, and disturbance of consciousness. A CT scan of the brain revealed a large mass in his posterior fossa and

hydrocephalus. Surgery was performed on an emergent basis, but only minor tumor resection could be performed due to massive intraoperative hemorrhage. The histopathological diagnosis was immature teratoma. Postoperatively, the infant was in critical condition due to severe postoperative complications, and when he was transferred to the authors' institution 43 days after birth, his respiratory condition was still unstable because of lower cranial nerve palsy. Chemotherapy with carboplatin and etoposide resulted in moderate shrinkage of the tumor. Further chemotherapy led to improvement in the patient's general condition and weight gain, which allowed for a second attempt at resection. During this second surgery, which was performed when the child was 8 months of age, after 8 courses of chemotherapy, the tumor was completely resected with little bleeding. Histological findings from the second operation were consistent with mature teratoma. This case indicates that upfront chemotherapy may be effective for the initial management of such cases. Although the objective response to the treatment was modest, chemotherapy reduced the hemorrhagic nature of the tumor, facilitated improvement of the patient's general condition, and allowed for successful resection [5].

2013

A very rare case of mature posterior fossa teratoma in an adult who presented with clinico-radiological findings consistent with a dermoid cyst. A computed tomography scan showed a hypodense mass in the cisterna magna with calcification and a sinus tract in the occipital bone. Magnetic resonance imaging revealed a hypo- to hyperintense mass without contrast enhancement. The intraoperative picture showed a dermal sinus and a cyst containing lipid, keratin and hair. Histopathological examination showed a tumor with components of all the three germ layers; thereby, a diagnosis of mature teratoma was made. The histopathological differentiation between teratoma and dermoid cyst is very valuable for ruling out the presence of immature/malignant or germinomatous components that would require further adjuvant therapies. Thus, we here present a rare case of posterior fossa teratoma mimicking dermoid cyst and emphasize the importance of histopathological differentiation between these entities [6].

A 5-year-old boy with posterior fossa teratoma who recovered completely after medical and surgical intervention [7].

2012

A 11-year- old caucasian female with progressive headache that caused interrupted sleep. Cerebral magnetic resonance imaging showed a midline lesion in the posterior fossa with mass effect and without contrast enhancement. Anatomic pathology revealed a mature teratoma. Differential diagnosis of midline lesions in pe- diatric patients must include teratomas in spite of be- ing posterior fossa lesions [8]).

2001

A 20-day-old female neonate presented with an immature teratoma in the midline posterior fossa. The tumor was totally removed but the patient died of pneumonia. Teratoma is a rare tumor, but very difficult to treat as the patients tend to be young, and the outcome is very poor [9].

1)
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