Brief Reports

Choroid Plexus Papilloma in Infancy

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Choroid plexus papillomas are relatively uncommon tumors arising from the epithelial cells of the choroid plexus of the brain. Here we report a case of choroid plexus papilloma in an infant. The significance of the following case report lies in the fact that ultrasonography and computerized tomography may reveal interesting treatable pathologies in infants which would otherwise have been labelled as "congenital hydrocephalus".

Case Report

A 3½-month-old female baby was admitted with history of high grade continuous fever, refusal of feeds for 10 days and a gradual increase in head size with a downward gaze of eyes for 5 days. There was no history of vomiting, seizures, paucity of movements of limbs, swelling over the back and urinary or bowel incontinence. Antenatal, natal and postnatal history was uneventful. Weight, height and head circumference was normal at birth. Examination revealed a listless child, having a big head with wide open fontanelles and sutural separation. The head circumference was 44.5 cm and the anterior fontanelle was tense and bulging. On neurological examination, the cranial nerves, motor system and fundus were normal. The systemic examination was within normal limits. CSF pressure was high, cytochemical examination of CSF showed 62 polymorphs/mm^3 and high protein content. Blood culture grew *Staphylococcus aureus*. Roentgenogram of skull showed wide sutural separation.

Ultrasonography revealed marked dilatation of both the lateral ventricles with a mass in right ventricle in continuation with choroid plexus suggesting a choroid plexus tumor. The computerized tomography (CT) with and without contrast demonstrated a large, lobulated, hyperdense mass with calcification which was homogenous on enhancement occupying the anterior part of body of right lateral ventricle. There was generalized dilatation of all the ventricles and interstitial edema in the periventricular region more on right side.

The child was diagnosed as a case of choroid plexus papilloma with pyogenic meningitis and septicemia. She was put on appropriate antibiotics and supportive therapy and neurosurgical consultation was sought. The child was taken up for surgery after 2 weeks of antibiotic therapy. A large tumor mass was removed which on histopathology confirmed the diagnosis of choroid plexus papilloma. However, the child expired on 2nd postoperative day.

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Discussion

Choroid plexus papillomas are seen at all ages with an incidence of 0.5% of all brain tumors in adults(1). However, the incidence is higher in children ranging from 1.5-3.9%(2,3). In a study of 14 cases by Pascual *et al.*(4) all the patients were less than 2 years of age. This child also presented during early infancy. In the present case the tumor was found occupying the anterior part of body of right lateral ventricle which is the commonest site (80.17%); however, it may be present in 3rd or 4th ventricle also(4). It is more common in males than females. Progressive enlargement of head or hydrocephalus as in the present case, is the most frequent mode of presentation. This may be due to: (*a*) obstruction to CSF flow by tumor mass(5), (*b*) subarachnoid fibrosis due to blood ooze(6), and (*c*) over production of CSF(7). The other associated features can be mental retardation, irritability, vomiting, lethargy, motor and sensory disturbances and seizures. CSF is xanthochromic and proteins are increased in 2/3rd of patients. Tumor calcification is seen in 21% on plain *X*-ray of skull(8) in adults and less commonly (4.10%) in children. The diagnosis was confirmed by ultrasonography and CT scan which are the investigations of choice. This can also reveal the location of tumor, severity of hydrocephalus and displacement of intracranial structures(9). Further, the contrast CT scan can also differentiate between malignant and benign papillomas as the contrast concentrates in the tumor nodule in benign cases while it diffuses and gets generalized in malignant ones. The treatment of choroid plexus papilloma is either excision or shunt surgery as a first measure followed by total excision later on. This can lead to cure and/or partial to complete resolution of hydrocephalus. The final outcome of these patients is however, poor with a high pre- and post-operative mortality or else severe mental retardation(3,4,9).

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