

Poster presentation

Anterior encephalocele: staged reconstruction

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Background

Encephaloceles are congenital herniation of cerebral tissue through the skull. It occurs in the midline sagittal axis from the occiput to the nasofrontal region. Anterior encephalocele comprises 15–20% of the cranial encephaloceles. They can be classified as Naso-frontal, naso-ethmoidal and naso-orbital or combination of these. It is rare in western countries, but seen frequently in oriental countries. In Assam, a north-eastern state in India, anterior encephaloceles are seen commonly among the manual labours employed in the tea Industries.

Materials and methods

28 patients (mean age: 38 months, range – 1 month to 12 years) with fronto-nasal swelling treated at Assam Medical College & Hospital, Dibrugarh, India between 1999 and 2007 are presented. 16 patients have undergone repair. Procedures adopted were VP shunt in patients with hydrocephalus followed by intracranial repair (bifrontal craniotomy + division of encephalocele + repair) and lastly extracranial repair with correction of hypertelorism. Patients without hydrocephalus were treated in 2 stages. In 4 patients all the procedures were done in one stage. Patients were followed up for periodic evaluation of physical and neuro-psychological status.

Results

Two patients with frontal dermoid cyst were excluded from our study. 16 patients had naso-frontal, 9 had nasofronto-ethmoidal and 3 patients had naso-orbital encephaloceles. 12 patients had associated hydrocephalus. A total of 29 operative procedures were done: VP shunt (12 patients), external repair (8 patients), transcranial

repair(12 patients), combined trans- & extracranial repair was done in 4 patients. 2 patients developed CSF fistula during post-operative period. One of them died. 1 patient had wound infection. Mean follow up was 38 months (1 month – 92 months). MPQ in operated patients were between 80–90%.

Conclusion

Anterior encephaloceles are rare in western countries and other states of India, but it is more commonly seen among the ethnic tea garden workers in Assam. Their unique life style, social customs, dietary habits and prevalent consanguineous marriage may provide some clue as to the etiological factors of this condition.