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RESEARCH ARTICLE

A Rare Case of a Porencephalic Cyst

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Abstract

Pore cephalic cysts are rare entities. They may be associated with Developmental delays and multiple problems like infections, trauma, drugs, ischemic and hemorrhagic lesions of brain. The clinical expression depends on the location of these cysts. The article presents a brief overview of these cysts .We present a case of a new born who presented with increased head circumference and on investigation revealed a Porencephalic cyst.

INTRODUCTION

A week old newborn presented with a history of enlarged head and multiple seizures. Head circumference was increased. CT Scan head revealed a large non enhancing fluid filled cystic lesion Routine investigations like WBC, ESR, Blood sugar, Kidney function tests were normal. Porencephaly refers to the presence of cysts or cavities within the brain that result from development defects or acquired lesions, including infarction of tissue. The porencephalic cyst represents a fluid filled intracranial lesion that may communicate directly with the ventricular system of brain. True porencephalic cysts are most frequently located in the region of the sylvian fissure and typically communicate with the subarachnoid space, the ventricular system, or both.

Text:

They represent developmental abnormalities of cell migration and are often associated with other malformations of the brain[1] including microcephaly, abnormal patterns of adjacent gyri, and encephalocele. They are usually unilateral and in rare cases can be bilateral. These infants tend to have multiple problems, including mental retardation, spastic quadriparesis, optic atrophy, and seizures. [2]

They were discovered first by Heschl [3]Pseudoporencephalic cysts characteristically develop during the perinatal or postnatal period and result from abnormalities of arterial or venous circulation. These cysts tend to be unilateral; they do not communicate with a fluid-filled cavity; and they are not associated with abnormalities of cell migration or CNS malformations. [4,5,6]

This One week old newborn presented with a history of enlarged head and multiple seizures. His Head circumference was increased. CT Scan head revealed a large non enhancing fluid filled cystic lesion Routine investigations like WBC, ESR, Blood sugar, Kidney function tests were normal. Mother had no Significant history of any ailment. She was Euthyroid, Euglycemic and Non Hypertensive without any significant drug intake.

Infants with pseudoporencephalic cysts present with hemiparesis and focal seizures during the 1st year of life. Infants may present with CSF otorrhea or CSF rhinorrhea as well. The complications can be in the form of Hemi paresis , developmental delays, hypertonia, spasticity as well as ataxia depending upon the location of the cyst.
Antenatal diagnosis by USG is possible. A real time portable Ultrasound is also helpful. It can be diagnosed as early as three weeks, The skull roentgenogram can also provide a useful diagnostic procedure .Computed tomography (CT) scanning and magnetic resonance imaging (MRI) are used more sensitive. It may demonstrate fractures, intracranial calcification, craniosynostosis, congenital anomalies, or bony defects and evidence of increased intracranial pressure. CT scanning has revolutionized the neuroradiologic examination of children, obviating pneumoencephalography, and has greatly reduced the requirement for cerebral angiography. CT scanning is a noninvasive procedure that utilizes conventional x-ray techniques. Sedation is usually required for infants and young children, because a lack of head movement is essential during the study. CT scanning is also useful in demonstrating congenital malformations of the brain, including hydrocephalus and porencephalic cysts, subdural collections, cerebral atrophy, intracranial calcification, intracer-ebral hematoma, brain tumors and areas of cerebral edema, infarction, and demyelination. These cysts need differentiation from Arachnoid cysts, neuroglial cysts and holoprosencephaly.[7]

Conclusion:

Porencephaly is a rare phenomenon. However in view of the fact that it may be associated with multiple syndromes and can pose a serious challenge to the development of a child in addition to the fact of distinguishing them from other cystic lesions of the brain , these cysts should be thoroughly investigated for.

Refrences:

1. Gardener-Medwin D. Developmental abnormalities of the nervous system. In: Oxford Text Book of Medicine, vol 3, 3rd edn. Eds. Weatherrall DJ, Ledingham JGG, Oworall DA, New York, Oxford Medical Publications, 1996; p 4116.
2. Yang DN, Townsend E JC, Ilsen PF, Bright DC, Welton TH. Traumatic porencephalic cyst of the brain. J Am Optom Assoc 1997; 68: 519-526.
3. Heschl R. Gehirndefect und Hydrocephalus. Prag Vjschr Prakt Heilk 1859;61 :59-74
4.Friede RL. Developmental neuropathology. New York : Springer,1975: 1 0 2-1 22
5. Cantu RC, Lemay M. Porencephaly caused by intracerebral hemorrhage. Radiology 1967;88: 526-530
6. Courville CB. Intracerebral hematoma; its pathology and pathogenesis.Arch Neuro/1957 ;77 : 4 64-472
7. Pilu G, Falco P, Perelo A, Sandri F, Cochi G, Ancora G et al. Differential diagnosis and outcome of fetal intracranial hypoechoic lesions: Report of 21 cases. Ultrasound Obstet Gynecol 1997; 9: 229-236.

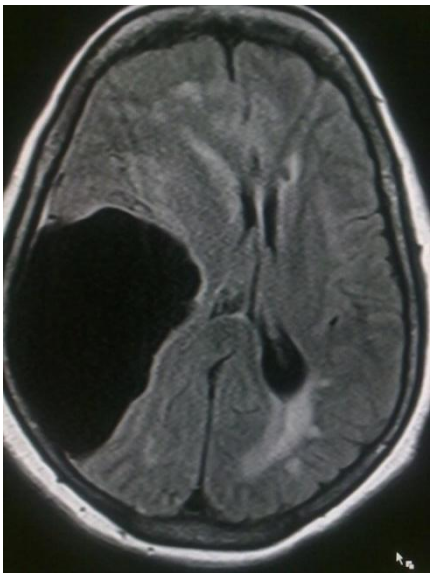

Fig 1 : A Porencephalic cyst

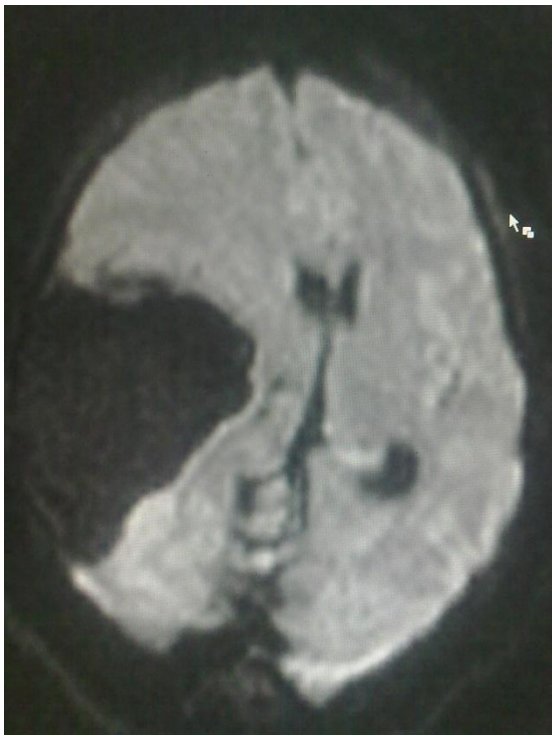

Fig 2 : CT Scan Porencephalic cyst

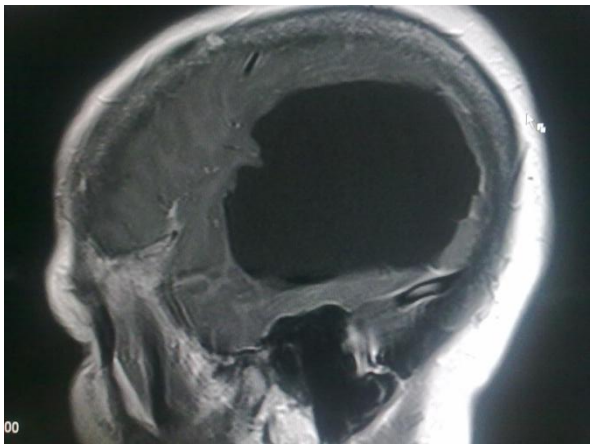

Fig 3 Saggital Section of Porencephalic cyst