Research Paper

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Neonatal aspergillus cerebellar abscess

Medical Science

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Dr. Vaibhav N.Patel	40, jay ambika society, Opposite bhaduatnagar, Isanpur road, Maninagar, Ahmedabad – 8.
Dr. Jignesh Panchal	38, Vijay park soc., Near gor kuvo, Maninagar East, Ahmedabad – 380008.

ABSTRACT

Brain abscess is common in 4-8 year children and neonates. Mostly a complication associated with meningitis, sinusitis, or scalp infection. Common organisms associated with brain abscess are streptococci, h. influenza, etc. Citrobacter is the most common in neonates. Aspergillus infection is found in immunodeficiency.This case is a neonate that presented with fever and Vomiting for 2 days, convulsion and neuroimaging suggestive of cerebellar abscess with hydrocephalus. On pus culture aspergillus was isolated. Medical and surgical management was started accordingly and the neonate was showing improvement. Aspergillus infection is rare in neonates and with no evidence of any immunodeficiency. The prognosis is guarded with associated complication like hydrocephalus, developmental delay, behavioural problems seen in more than 50% of cases.

Brain abscess, common in children and neonates. Although common causes include CHD with R-L shunts, meningitis, chronic otitis media and mastoiditis, soft tissue infection of the scalp. Brain abscesses in the cerebellum and brain stem account for about 20% of cases. Citrobacter is the most common bacteria responsible in neonates. The non specific symptoms of brain abscess, often makes the diagnosis difficult. A cerebellar abscess is characterized by nystagmus, ipsilateral ataxia and dysmetria, vomiting and headache, making it difficult to diagnose in neonates. In our case we represent a 9 day old case of cerebellar abscess with aspergillus infection, which is rarely encountered.

INTRODUCTION –

Brain abscess can occur in children of any age but most common in children between 4 and 8 years and neonates. The causes of brain abscess include embolization due to CHD with R-L shunts, meningitis, chronic otitis media and mastoiditis, sinusitis, soft tissue infection of the scalp, orbital cellulitis, immunodeficiency states and infection of the ventriculoperitoneal shunts.

Brain abscess in 80% cases are equally divided between the frontal, parietal and temporal lobes. Brain abscesses in the occipital lobe, cerebellum and brain stem account for about 20% of cases. Most brain abscesses are single. The abscesses resulting from penetrating injuries tend to be singular whereas those resulting from septic emboli, CHD or meningitis often have several causal organisms. The responsible bacteria include streptococci, anaerobic organisms, and gram negative aerobic bacilli. Citrobacter is most common in neonates. One organism is cultured in 70% of cases. Fungal abscesses (aspergillus, candida) are more common in immunosuppressed patients.

A cerebellar abscess is characterized by nystagmus, ipsilateral ataxia and dysmetria, vomiting and headache. If the abscess ruptures in to the ventricular cavity, shock and death usually ensue. The aspiration of the abscess is much more likely to establish a bacteriologic diagnosis. MRI is the diagnostic test of choice.

CASE PRESENTATION –

A Full term vaginally delivered male child having complaint of fever since 2 days was admitted at private hospital and given i.v. fluids and injectable antibiotics.The neonate was taking feeding well, but on 4th day of admission developed lethargy refusal to feed and convulsion. The blood investigations were deteriorating with falling platelet level. Four times blood transfusion was required, patient was operated after CT scan report suggestive of brain abscess and hydrocephalus. Histopathology and pus culture report was suggestive of aspergillus fumigatus, so i.v. amphotericin B was started and child was improving.



INVESTIGATIONS –

CSF – cells 5500 with 92% polymorphs, protein 160, sugar 30.



Hb 12.2 TC 1000 APC 29000

CRP 72.4, Urea 98.6, Creatinine 1.7, Calcium 1.7



BLOOD CULTURE – no growth.

ABSCESS CULTURE showed Aspergillus.

CT SCAN – Left cerebellar abscess with hydrocephalus.

MRI BRAIN Post operation – moderate to gross hydrocephalus.

REFERENCE

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