Clinico-Etiological Spectrum of Children with Bilateral Basal ganglia lesions: An Observational Study from A Tertiary Care Centre

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INTRODUCTION

Basal ganglia, site of high adenosine triphosphate (ATP) production are affected with various disorders. Observational study aims to analyze etiological and radiological spectrum of this entity.

OBJECTIVE:

To enumerate the radiological and etiological spectrum associated with MRI evidence of " bilateral basal ganglia lesions" among children aged 2 months to 18 years, attending Rainbow Children's Hospital

METHODOLOGY

Study Design: Cross sectional, observational study

Study Site: Rainbow Children's Hospital, Hyderabad

Inclusion criteria:

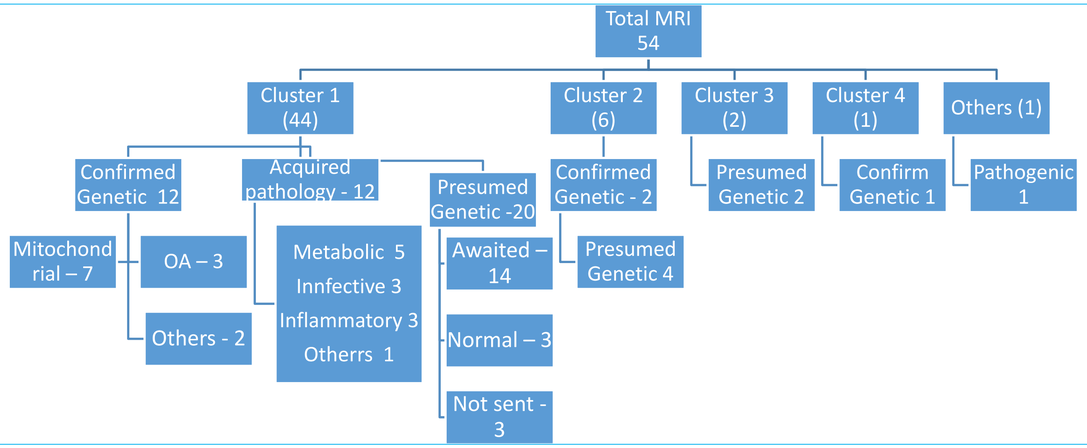
Children attending Neuro Outpatient department or admitted at Rainbow Children's hospital with acute neurological symptoms/signs (upto 28 days) having MRI Evidence of Basal ganglia lesions on evaluation.

Age group – 2 months to 18 years

Exclusion Criteria:

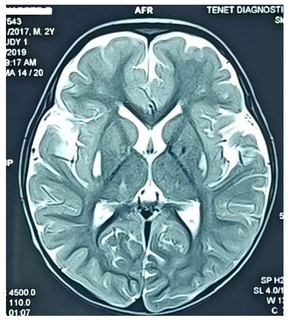
Children with clinical history suggestive of perinatal asphyxia (Neonatal encephalopathy, neonatal seizures of any etiology)

RESULTS

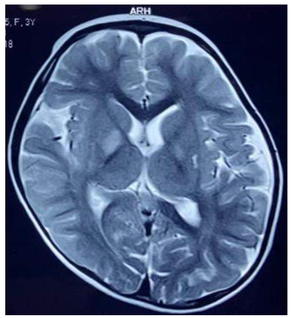


[1]Cluster 1- T2W HI Putamen
Cluster 2 - T2W HI GP OR Inc Susceptibility in GP
Cluster 3 -T2W HI, DR GP, BS, Cerebellum
Cluster 4 pattern -T1W HI BG

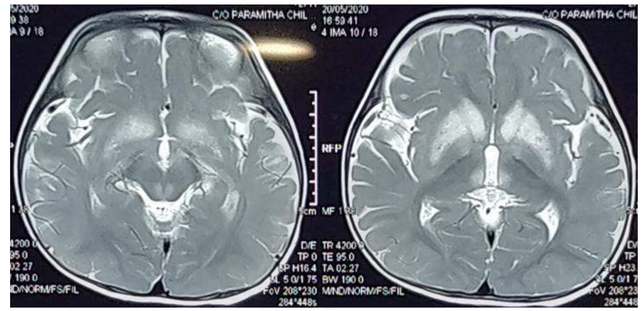
Conclusion: Most common basal ganglia lesions involve bilateral striatum. Common etiologies are mitochondrial disorders followed by infective and demyelinating diseases. Categorization into cluster patterns narrows down the differential diagnoses.



T1. 2W HI Putamen

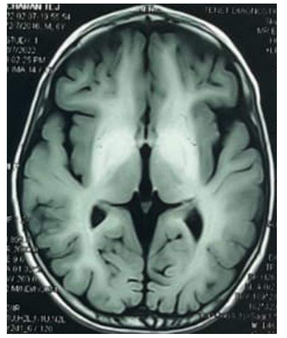


2. T2W HI GP OR Inc Susceptibility in GP



3. T2W HI, DR GP, BS, Cerebellum

1. SURF1 Homozygous mutation
2. PDHA1 Heterozygous mutation
3. Presumed Mitochondrial disorder
4. SLC30A10 Homozygous Mutation



4. T1W HI BG

Bibliography

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