



ARTERY OF PERCHERON INFARCTION IN A CHILD: A RARE CASE REPORT

Paediatric Medicine

Dr Pravalika Yalal Junior Resident Dept of Pediatrics Navodaya Medical College and Research Centre Raichur

Dr Abhishek Patel* Associate Professor Dept of Pediatrics Navodaya Medical College and Research Centre Raichur *Corresponding Author

Dr Sanjeev Chetty Professor Dept of Pediatrics Navodaya Medical College and Research Centre Raichur

ABSTRACT

Artery of Percheron (AOP) infarction is a rare vascular event resulting in bilateral thalamic infarction, especially uncommon in the pediatric population. Its diagnosis is often delayed due to nonspecific clinical presentation and normal initial computed tomography (CT) imaging. We report a case of a 6-year-old male presenting with acute neurological deficits, later diagnosed with AOP infarction on magnetic resonance imaging (MRI). This case emphasizes the importance of early suspicion and advanced imaging in pediatric stroke.

KEYWORDS

Artery Of Percheron, Pediatric Stroke, Bilateral Thalamic Infarct, Mri Brain, Rare Stroke

INTRODUCTION

The Artery of Percheron is a rare anatomical variant of the posterior cerebral circulation, where a single arterial trunk supplies bilateral paramedian thalami and the rostral midbrain. Infarction of this artery leads to characteristic bilateral thalamic lesions. Due to its rarity and variable clinical presentation, particularly in children, early diagnosis remains challenging. Initial CT scans are frequently normal, contributing to diagnostic delay.

Case Presentation

A 6-year-old male child, born to non-consanguineous parents, with no significant antenatal, perinatal, or past medical history, presented with sudden onset weakness of the right upper and lower limbs.

On admission, the child was hemodynamically stable with a Glasgow Coma Scale (GCS) score of 12/15.

Neurological Examination

Right side: Power: 2/5

Tone: Hypotonia

Reflexes: Diminished (1+)

Left side: Power: 5/5

Tone: Normal

Reflexes: Normal (2+)

Cranial nerve findings: Dysarthria

Left-sided deviation of angle of mouth

Loss of nasolabial fold

Sensory and autonomic examination: Normal

The child was stabilized and shifted to the Pediatric Intensive Care Unit (PICU).

Investigations

Initial CT brain was normal, ruling out hemorrhagic stroke.

Laboratory investigations including:

Complete blood count (CBC) with peripheral smear

Renal function tests (RFT)

Liver function tests (LFT)

Vitamin B12

Ferritin

Homocysteine

All were within normal limits.

After 12 hours, there was partial improvement in limb power and tone; however, dysarthria and facial deviation persisted.

Subsequently, MRI brain with MR angiography (MRA) revealed bilateral medial thalamic infarcts, consistent with Artery of Percheron infarction.

Management

The patient was managed with:

Aspirin (5 mg/kg/day)

Hypertonic saline (3% NaCl) for cerebral edema

Levetiracetam (Levipil)

Supportive and anti-edema measures

DISCUSSION

AOP infarction is a rare cause of stroke, particularly in children. The classical presentation includes altered sensorium, vertical gaze palsy, and memory disturbances; however, presentations may vary widely.

Diagnosis is often difficult due to:- Normal initial CT imaging

Variable and nonspecific neurological symptoms

Lack of clinical familiarity

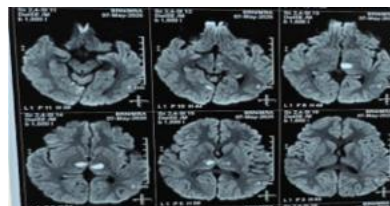
MRI is the gold standard for diagnosis, typically demonstrating bilateral paramedian thalamic infarcts.

Early diagnosis is crucial for timely initiation of antiplatelet therapy and supportive care, which may significantly improve outcomes.

CONCLUSION

This case highlights the importance of considering Artery of Percheron infarction in pediatric patients presenting with acute neurological deficits and normal CT findings. Early MRI evaluation plays a critical role in diagnosis and management, helping to reduce morbidity.

Parameter	Value(s)
Hb	8.6 g/dL
TLC	10960, 9290 cells/cu mm
PLC (WBC)	6876
Platelets	3.16, 2.5 lakhs/cu mm
PCV	18.6, 26.4 %
Blood Urea	41.0, 41.2 mg/dL
Serum Creatinine	6.5, 0.6 mg/dL
Na+	138, 156 mmol/L
K+	5.5, 6.0 mmol/L
CRP	1.0, 10.5, 1.9
INR	1.09
APTT	29.2, 26.1 sec
Total Bilirubin	2.0 mg/dL
Conjugated Bil	0.3 mg/dL
Unconjugated Bil	1.7 mg/dL
AST	91, 24 IU/L
Total Protein	6.2, 6.5 g/dL
Albumin	4.3, 2.4 g/dL
Globulin	2.0, 2.1 g/dL
ALP	200, 343 IU/L
Triglycerides	104 mg/dL
Total Cholesterol	62 mg/dL
Vitamin B12	229 pg/mL



REFERENCES

1. Lazzaro NA, et al. Artery of Percheron infarction: imaging patterns and clinical spectrum.
2. Matheus MG, Castillo M. Imaging of acute bilateral paramedian thalamic infarcts.
3. Arauz A, et al. Clinical spectrum of artery of Percheron infarct.