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Case Report

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# CENTRALVENOUS SINUS THROMBOSIS FOLLOWING ACUTEGASTROENTERITIS AND SEVERE DEHYDRATION: A CASE REPORT

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## ABSTRACT

Cerebral venous sinus thrombosis (CVST) is a rare disease in childhood but can cause irreversible neurological consequences. Early diagnosis and management hence become important. Gastroenteritis causing severe dehydration is a direct cause of CVST; hence in a tropical country like India where gastroenteritis among children is very common, the suspicion of SCVT can help in early diagnosis and preventing morbidity. Here the author discusses a case who presented with tonic-clonic movements with history of loose stools. On work up he was diagnosed with CVST.

**KEYWORDS:** Cerebral venous sinus thrombosis, acute gastroenteritis, severe dehydration.

## INTRODUCTION

Cerebral venous sinus thrombosis (CVST) in childhood disease associated with a number of risk factors, infections, inflammatory diseases, including genetic and acquired prothrombotic conditions, hematologic disorders, drug use and trauma.[1] In pediatric patients, gastroenteritis and dehydrationhave been reported as direct causes of CVST.[2] The diagnosis of CVST has increased due to greater diagnostic suspicion, improved neuro-imaging techniques and increased survival of children with diseases that predispose them to the development of CVST.[3]

## CASE REPORT

A 5-month-old male child first born to a non-consanguineousmarriage with a smooth perinatal transition. He attained his milestones appropriately as per his age with neck holding, bringing both hands to midline, recognizes mother, coos and laughs. The child had faulty feeding and developed loose stools with vomiting. He had 10-12 episodes of watery, foul-smelling stools without blood and mucusand hadnon-projectile, non-biliousvomiting consisted of undigested milk. In view of above complaints, the child was admitted to the hospital which got settled down within 2 days. On 3rd day of hospital admission, the child developed high grade fever of $104^0$F with tonic-clonic movements of both left upper and lower limbs for less than 15 seconds associated with vacant gaze and followed by paucity of movements of affected limbs without any post ictal drowsiness or loss consciousness. With these complaints child was admitted to a regional health center of north India. Two such similar episodes happened on consecutive days each lasted for less than 15 seconds. There was no history of head trauma or vaccination. Neurological examination showed normal eye to eye contact with fixing and following, no obvious Cranial nerves deficit. He had decreased tone and power on left side of limbs with brisk deep tendon reflexes. On investigation he had moderate anemia with normal biochemical profile. His seizures were managed with phenobarbitone.

CECT head revealed afilling defect in right transverse sinus suggestive of sinus thrombosis with Hypodensity in white matter in right frontoparietal lobe and right basal ganglia, possibly a Venous infarct. Injection Enoxaparin was started subcutaneously and planned to continue for 3 months. Child developed recurrence of loose stool during hospital stay. On reviewing history, improper dilution of formula feeds was identified. Parents were counseled regarding proper feeding techniques and regular physiotherapy was done during the hospital stay on which there was neurological improvement which was also observed during the follow up visit.

## DISCUSSION

CVST can present with variable symptoms such as headache, or altered consciousness. Focal abnormalities and seizures should alert physicians to the possibility of venous thrombosis. CVSTis a potentially life-threatening disease, and diagnosis is often delayed because of a

diverse set of symptoms and variable disease course.[4] CVST treatment should start as soon as possible after the diagnosis has been confirmed and should aim atreversing the predisposing factor,controlling the seizures and intracranial hypertension, antithrombotic treatment to recanalize the sinus obstruction, prevention of thrombus propagation and treating the prothrombotic state to prevent recurrences.[5] For children with CVST without significant intracranial hemorrhage, the evidence-based guidelines of the American College of Chest Physicians recommend initial treatment with unfractionated heparin or LMWH. Although CVST is a rare (even more so in childhood) but resulting in severe complication, it is important to understand the association of the disease because the neurological prognosis will depend on early diagnosis and early initiationof treatment.

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