

Abstract:

Cerebral Venous Sinus Thrombosis (CVST) is a relatively uncommon condition with a wide range of clinical characteristics. It is more frequently observed in young adults, particularly in females, and can be linked to pregnancy, the puerperium, and the use of oral contraceptive pills. Other associated risk factors are hypercoagulable states, infections, dehydration, and substance abuse. Hyperhomocysteinemia is found to be closely associated with an enhanced risk of cerebral venous thrombosis. Advanced neuroimaging techniques have facilitated the diagnosis of CVST in recent times.

This case report presents the clinical profile of a 40-year-old previously healthy male who presented with a severe headache and a generalized tonic-clonic seizure. Detailed investigations revealed a severe mixed deficiency anemia with predominant vitamin B12 and folate deficiency. Neuroimaging revealed acute hemorrhages in the left cerebral hemisphere and venous sinus thrombosis involving the left transverse sinus, confirming the diagnosis of CVST. The individual adhered to a strict vegetarian diet, which resulted in vitamin B12 deficiency and subsequently led to hyperhomocysteinemia and CSVT. Extensive investigation profile helped us to identify the cause of cerebral venous thrombosis who did not have other usual other risk factors for CVST. This case report emphasizes the importance of considering hyperhomocysteinemia secondary to vitamin B12 deficiency as a potential risk factor for CVST. It under scores the significance of including vitamin B12 and homocysteine levels in the workup of patients presenting with CVST, especially in those without traditional risk factors. Early diagnosis and appropriate management, including anticoagulation therapy and addressing the underlying deficiency, play a crucial role in achieving positive outcomes for patients with CVST.