Case study

CASE REPORT ON CEREBRAL VENOUS SINUS THROMBOSIS

ABSTRACT

INTRODUCTION: Cerebral venous sinus Thrombose is the unusual cause of a stroke affecting both reproductively old and genetically or thrombotic risk factors (CVST). The superior sagittal sinus and the cross sinus are two most common places for thrombus formation.

CASE PRESENTATION: A 26-year-old Man was taken to the Acharya Vinoba Bhave Rural Hospital with a new-onset complex-partial seizure with secondary generalization, headache, and emesis. Seven days before presentation later on he experiences headache which was acute in onset and continues in nature which was associated with fever which was acute onset of 8 intermittent in nature for which patient took medication from local practitioner but got no relief. Patient had 1 episode of seizers lasting for 3-4 mints. Which was associated with fall on ground and line of control for 5 mints. Patient was complained about weakness in left upper limb.

The patient was then transferred to our care institution for definitive management. On arrival, the patient's neurological examination was intact and he reported a severe (8/10) headache. MRI imaging performed at our institution. The patient was followed clinically, and no posttreatment imaging studies were performed. Following a 3-day hospital stay, the patient reported a significant reduction in headache severity and was discharged home.

CONCLUSION: A patient with cerebral venous sinus thrombosis combines physical and psychological therapy. The study mainly focuses on professional management and an outstanding nursing programme that allows CVST to deliver extensive care and efficient management of the case. After a complete recovery the whole healthcare team is working together to help the patient reassure him/her.

KETWORD: Cerebral venous sinus thrombosis, seizers.

INTRODUCTION:

When a blood clot develops in the venous sinuses of the brain, it is termed as cerebral venous sinus thrombosis (CVST). The clot prevents blood from leaving the brain. As a result,

the blood arteries get clogged with pressure. This can cause brain enlargement and bleeding (hemorrhage).

This sequence of events is part of a stroke, which can affect adults and children alike. Even newborns and kids in the womb are susceptible to it. The brain and central nervous system are both vulnerable to stroke. A stroke is a life-threatening condition that necessitates immediate medical intervention. Cerebral sinovenous thrombosis is another name for this ailment.

The presence of a blood clot in the Dural venous sinuses (which drain blood from the brain), the cerebral veins, or both is known as cerebral venous sinus thrombosis (CVST), cerebral venous and sinus thrombosis (CVST), or cerebral venous thrombosis (CVT). Severe headaches, visual problems, and any of the stroke symptoms such as weakening of the face and limbs on one side of the body, as well as seizures, are all possible indications.

Cerebral vein thrombosis or venous sinus thrombosis is a far less prevalent cause of cerebral infarction than arterial sickness. Clinical diagnosis might be difficult, however current imaging techniques enable for earlier detection and treatment.

Many cases previously classified as benign intracranial hypertension could really be cases of cerebral venous thrombosis. Patients with a prothrombotic tendency (for example, during pregnancy) who also have a local infection (for example, sinusitis) and are either dehydrated or have widespread malignancy are more prone to get it. Seizures and headaches are common[1]. (Stroke Guidelines; Royal College of Physicians (2016))

Knowing the anatomy of venous drainage is just as crucial as knowing the anatomy of arterial occlusion when making a clinical diagnosis. There may be other medical issues that need to be addressed.

CVST is a very uncommon kind of stroke. Every year, it affects around 5 people out of every million. In infants, the risk of this type of stroke is highest during the first month. A stroke affects around 3 out of every 300,000 adolescents and teenagers under the age of 18.

PATIENT INFORMATION:

A 26-year-old man was sent to the Bhave Rural Hospital of Acharya in the previous 5 days with the major complaint of headache and nausea, upper limb monoplegia and one episode of seizers since yesterday, 2 bouts of seizers tonight. He is a patient with an acute history of intermittent fever. No trace of an important family history was found. The family of the patient comes from an arduous history. He and his family enjoy good interpersonal relationships with relatives, neighbors and other family members. The procedures included: full blood count, blood clot, blood fluid (pleural), renal function testing, testing of the liver function, blood sugar, and a micro-recorded trial. The MRI brain was checked with MRV. Order of the doctor to take lesion. Phenytoin, lesion. Levpril, lesion. Levpele, lesion. Emset, lesion. Optinewon, lesion.

PHYSICAL EXAMINATION:

On physical examination, the patient has experienced patient had upper left limb monoplegia since yesterday morning. S_1 and S_2 sound can be heard in the cardiovascular system. Air and trees are bilaterally equal in the respiratory system (AEBE), pupils are reflected to light, tone and power of both upper and lower limbs are normal. Then, as quickly as possible, treatment was beginning.

DIAGNOSTIC INVESTGIATION:

BLOOD TEST: - Hb%-15.7gm%, total RBC count-5.07millions/cu.mm, total WBC count-10100cu.mm, total platelet count-2.38Lacs/cu.mm, monocytes-03%, granulocytes-75%, lymphocytes-20%. KFT: - urea-18mg/dl, creatinine-0.8mg/dl, 138mmol/L sodium, 4.3mmol-potassium. Total protein-6.7g/dl, albumin- 3.5, total bilirubin- 0.7mg/dl, conjugated bilirubin- 0.2, unconjugated bilirubin- 0.5 is reported in LFT patient results. In peripheral smear RBC_s-Normocytic Normochromic, platelets- Adequate on smear. No Haemoparasite seen.

MRI BRAIN WITH MRV: - Normal flow vacuum is lost, with GRE blossoming in very bilateral cortical brain veins and superior sagittal, straight, rectangular and sigmoid sinuses. The right high parietal region is affected due to an e/o signal intensity lesion with DWI restriction and the concomitant low signal intensity of ADC, T2WI/FLAIR with a hyperintensity and T1W1 isointensity with small patches of GRE's/o acute venous offence. Noted the partial vacuum sella.

MR VENOGHAPHY: Failed to visualise superior sagittal sinuses, straight, transverse right and sigmoid Venous sinus thrombosis.

IMPRESSION MRI BRAIN WITH MRV REVEALS: Superior sagittal, straight transverse and sigmoid thrombosis thrombosis with minor, acute infringements in the right high lobe parietal.

EEG RECORD: EEG obtained with the (10-20) insertion of international electrodes. During the recording, the patient was asleep. The background record of >13 hz Beta in bilateral hemisphere has rhythmic synchronised activity. During recording there is no sign of epileptic discharge. There was no ictal activity triggered by a provocative operation.

IMPRESSION: Normal EEG record with movement artefacts.

MEDICAL MANAGEMENT:

On admission, the patient is oriented with the person and place, but after receiving treatment, he shows that his condition is not stable and an intravenous line has been placed, with prescription- inj. Phenytoin (100mg) TDS, inj. Levepril (1gm) BD, inj. Neomol (1mg) SOS, inj. Emset (4mg) SOS, inj. Optinewon (1gm with 100ml) OD, inj. Mannitol (100ml) QID, inj. Lomoh (0.6ml) BD, tab. Tegretel (200mg) BD and tab. Levpil (1g) BD.

NURSING MANAGEMENT:

Vital signs are recorded on a regular basis. The patient's condition has remained steady. He exhibits a reaction to treatment or a response to treatment. He was checked and monitored in ward. The nurse should devote her whole attention to the cerebral venous sinus thrombosis patient. Even if technical advancements are made, a thorough examination of the patient is still necessary. The oxygen level of the patient is kept track of. Indicators of development and stability, such as erratic breathing, stress or any changes in the patient's state, should be monitored. According to patient family members, excellent nurse care was delivered. Nurses aid the patient in regaining his or her earlier level of independence and enjoyment after a full recovery.

DISCUSSION:

While CVT is extremely diverse, one of the clinical syndromes usually produces: (1) intracranial pressure (headache, papilledema, and visual perturbation), (2) focal neurological condition (focal and seizure impairments) or (3) encephalopathy.[2,5,7] Because of many of these non-specific manifestations, clinical suspicion of the diagnosis requires confirming neuroimager with MRI or CT/CT venogram.[5,9] As diagnostic recognition and early detection and therapy progress has risen, the CVT long-term prognosis has improved.[14] From its early case series, the mortality rate of CVT dropped by between 20% and 50% from current estimates of 5–10% since the 1960s.[6,16]

A limited attention has been paid to the anatomy of the sphenoparietal sinus, initially identified by Breschet in 1829.[4,18] The sphenoparietal sinuses originates most usually at the lateral point of the smallest of the sphenoid's wings, and ends towards the course of the eyelids on the cavernous sinus in an extensive anatomical description with 15 eachveric specimens. While there are variances, the sphenoparietal sinus usually gets blood from the Sylvian vein and drains into the cave sinus.[18] Some argue the term "sphenoparietal sinus" a misnomer, in particular as contemporary anatomy investigations showed no consistent links to the mid-meningeal vein parietal section.[13.18]

Only one previously reported case was identified from our review of the English Literature on sphenoparietal sinus thrombosis reports. In 2018, a sphenoparietal sinus thrombosis was reported in an Italian woman of 38 years old who did not have recognizable risk factors. The patient had a week's medication-resistant headache history and a primary subdural bleeding was initially incorrectly identified. The patient was treated with low-molecular-weight heparin after an uncomfortable 10-day hospital stay following thrombus detection of the MR venography.[8] The fact that intra-parenchymal hemorrhages instead of subdural bleeding was found in the beginning is distinct from the case of Di Caprera et al. In addition, our case is the first report with direct oral anticoagulant (DOAC) management of sphenoparietal sinus thrombosis.

Nonetheless, the DOACs are a promising novel management strategy that prevents the risk of serious bleeding, cerebral hemorrhage and hepartum-induced thrombocytopenia, followed by warfarin is a standard of treatment for CVT.[15.12] A recent systematic study of the efficacy and safety of DOACs in comparison with VCAs has shown a comparable rate of re-channel thrombus, outstanding functional results and reduced incidence of severe bleeding.[11] Currently, only one randomized clinical study has been conducted comparing VKA with DOAC CVT treatment. Dabigatran and warfarin were proven to be safe and efficacious in preventing recurrent vein thrombotic episodes in those with a CVT.[10] Currently, several clinical trials in CVT treatment patients with a DOACS versus standard treatments are undertaken, evaluating mortality rate, venous thrombotic events, symptomatic intracranial hemorrhage and significant extracranial bleeding.[1,17]

CONCLUSION:

An unusual cerebral sinus thrombosis with hospital administration is documented successfully. Whilst seldom, the diagnosis of CVT and the characteristic image results presented should be considered as cerebral sinus thrombosis in individuals with signs and symptoms.

ETHICAL APPROVAL:

Not application.

PATIENT INFORM INTEREST:

Patient's informed consent was obtained when drafting a case report and for publishing.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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