



STUDY OF CLINICAL PROFILE AND OUTCOME OF CEREBRAL VENOUS SINUS THROMBOSIS

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ABSTRACT **Aim of the Study:** To study the clinical features risk factors and outcome of cerebral venous sinus thrombosis. **Methods:** 30 patients with a confirmed diagnosis of cerebral venous sinus thrombosis were taken up for the study. Detailed history clinical examination carried out in all cases and cerebral venous sinuses thrombosis was confirmed by CT Scan or conventional MRI or MR venogram. **Inclusion Criteria:** All patients suspected to have cerebral venous sinus thrombosis were evaluated but only those with confirmed diagnosis based on neuroimaging of cerebral venous sinus thrombosis were taken up for the study. **Exclusion Criteria:** Arterial infarcts, age below 18yrs were excluded from the study. **Results:** The Mean age of presentation in the study was 37-64years, out of 30 patients 15 were males and 15 were females with a sex ratio of 1:1. Majority of patients presented with Headache as the prominent symptom (73.33%) followed by convulsions (46.67%) and focal deficits. Overall outcome is good with 67.86% of patients with complete recovery at the time of discharge and a mortality rate of 6.67%.

KEYWORDS : CVST- Cerebral Venous Sinus Thrombosis, LMWH-Low Molecular Weight Heparin, Headache, Papilledema

INTRODUCTION

Cerebral venous sinus thrombosis is an uncommon form of stroke in the general population. It was in high frequency among patients below 40yrs and Women who are pregnant or using OC pills.

CVT has a wide spectrum of manifestation Headache is the most common presenting symptoms. Focal deficits occur in 1/3rd of patients. Neuro imaging is the cornerstone in diagnosis. Imaging modalities of choice are CT Scan and MRI with MR Venogram. CVT has a case fatality of <5% and almost 80% of patients recover completely. Early diagnosis of CVT is essential as it decreases the morbidity and mortality.

MATERIALS AND METHODS

30 patients admitted to K.G.H. with a confirmed diagnosis of cerebral venous sinus thrombosis were taken up for the study detailed history clinical examination.

Laboratory investigations were carried out in all cases of cerebral venous sinus thrombosis cerebral venous sinus thrombosis was confirmed by CT Scan or MRI or MR venogram. Lab investigations like complete blood picture, (Basic blood biochemistry PT, APTT, workup for hypercoagulable states) including serum homocysteine, antithrombin III, protein C, protein S, anticardiolipin antibody, factorvllaiden mutation. Lupus anticoagulant were done. All the patients were treated with anticoagulants initially with subcutaneous LM WH followed by oral anticoagulats. 4 patients required decompressive craniotomy out of which one patient died. Antiepileptics given to 19 patients and antidiuretic measures taken in 20 patients.

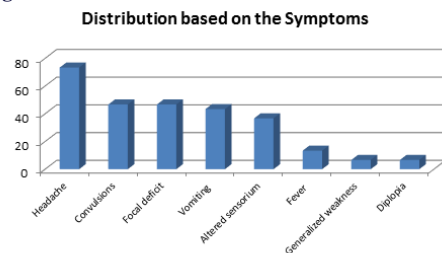
OBSERVATIONS:

AGE DISTRIBUTION: Majority of them were between 18 to 40 years of age, contributing to more than 50%. The youngest being 18 years and eldest 50 years of age, mean age of the patients is 37 years.

Sex incidence: Out of 30 patients 15 were males and 15 were females, showing sex ratio of 1:1. Out of 15 females 4 were in the puerperal group.

In the present study. most common symptom is headache 73% followed by convulsions 47%and focal deficits in 47% patients.

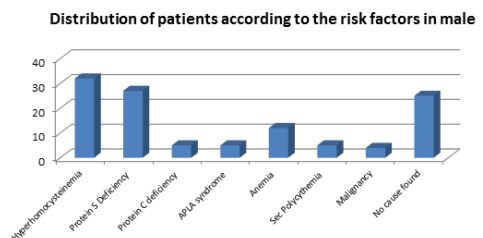
Bar Diagram - 1



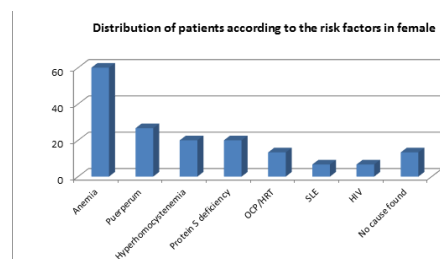
In the present study hemiplegia present in 40% and papilledema in 33% of patients and cranial nerve involvement in 3% of patients.

RISK FACTORS: Hyperhomocysteinemia was the most common risk factor identified in 33.3% followed by protein S deficiency in 20% of male patients. No cause identified in 26.7% of males. Anemia was the most common risk factor identified in 60% of the female patients followed by Puerperium in 20%. No cause could be identified in 1.33% of female patients.

Bar diagram-2



Bar diagram-3



In the present study the most common individual sinus identified was superior sagittal sinus in 13 patients, accounts for 43.33% followed by left transverse sinus in 11 patients.

OUTCOME: Mean hospital stay was 14 days in the present study. Out of 30 patients 19 had complete recovery, 6 patients had residual hemiparesis. One had diplopia, one had disphonia and one had persistent weakness at the time of discharge. 2 patients died during hospitalization. One due to transtentorial herniation and one from myocardial infarction.

DISCUSSION: In the present study the majority of them were in the age group of 18 to 40 years, Contributing to > 50%. Majority of patients had subacute presentation. Headache was the most common presenting symptom, 73%. Followed by convulsions, 46% and focal deficits 46% (Hemiparesis was the most common neurological sign followed by papilledema). The most common radiological finding was haemorrhagic infarction 43% followed by non-haemorrhagic infarct 33%. Cord sign was noted in 13%. Radiologically most common sinuses involved was transverse sinus in 43%. Overall outcome is good, 67% with complete recovery at the time of discharge and a mortality rate of 6.6%.

CONCLUSIONS:

1. The present study emphasizes that CVST is not an uncommon condition.
2. Clinical presentation is extremely varied and symptoms may evolve over hours to few weeks.
3. Important clinical features to suggest this disorder, are presentation with recent headache, Seizures, papilledema and focal deficits in the appropriate clinical settings. Puerperum is the most common risk factor identified in females.
4. Neuro imaging helpful in the diagnosis. MRI with MR Venogram is the current diagnostic modality.
5. Evaluation for an underlying treatable procoagulant state should be done.

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