

CLINICAL FEATURES AND IMAGING FINDINGS IN PATIENTS WITH CEREBRAL VENOUS SINUS THROMBOSIS AT KENYATTA NATIONAL HOSPITAL

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ABSTRACT

Introduction

Cerebral venous sinus thrombosis (CVST) is an uncommon cause of stroke, which over the past 10 to 15 years has been diagnosed more frequently due to greater awareness and the availability of better non-invasive diagnostic techniques⁽³⁾. It shows a wide range of clinical manifestations that may mimic many other neurological disorders and lead to misdiagnosis⁽²⁾. Imaging plays a key role in the diagnosis. Accurate and prompt diagnosis of cerebral venous thrombosis is crucial, because timely and appropriate therapy can reverse the disease process and significantly reduce the risk of acute complications and long-term sequelae.

Objective

To review the clinical presentation and patterns of neuroimaging studies in patients with CVST as seen at Kenyatta National Hospital.

Study Design and setting

A retrospective cross sectional descriptive study conducted at KNH. Subjects included records of all patients treated for CVST in Kenyatta National Hospital for the past 5 years.

Methodology

Clinical and imaging records of all patients treated for CVST in the 5 year period from September 2006 to September 2011 were reviewed. Imaging studies of CT scan, MRI or MRV, images were obtained from the records and reviewed for each patient. Data was cleaned and entered into STATA version 11 and analyzed. Results are presented in tables, pie charts and histograms.

RESULTS

A total of 51 patients with CVST were seen with median age of 30 years. The most common age group affected was 25-34 years all of them being females. Females were more affected (n=38, 74.5%) than males (n=13, 25.5%). The most common presenting clinical features documented were headache, seizures and neurological deficits. Aetiological factors commonly seen included infection (n=20,39.2%), pregnancy and puerperium (n=7,13.7%), oral contraceptive use (n=2,3.9%) and associated DVT (n=2, 3.9%). The most common NECT scan findings were hyperdense sinus and parenchymal changes. CECT showed empty delta sign in 41% of cases. Parenchymal changes were seen in more than 50% of cases. MRI showed loss of signal void in the sinus, gyral swelling and parenchymal signal change. MRVs findings showed filling defects in the affected venous sinuses. The most commonly affected sinus was the SSS followed by the transverse sinuses.

CONCLUSION

CVST is most commonly seen in young adult females due to infection, pregnancy, puerperium and oral contraceptive use. Risk of CVST is uniform across the age groups for males. The most common clinical finding in patients with CVST is headache, followed by seizures, neck pain, neurological deficits and visual disturbance. These clinical features are non-specific therefore there is need to maintain a high index of suspicion in the right clinical setting. Infective cause is much more common in our population compared to other regions. Thus CVST should specifically be sought in patients with CNS imaging studies in the right clinical setting. CVST is well picked on neuroimaging studies of NECT, CECT and MRI/MRV therefore radiologists interpreting these studies should maintain a high index of suspicion especially for young adult females with headache and other non-specific clinical presentations.

RECOMMENDATIONS

A prospective study should be done to determine the actual prevalence of HIV in patients with CVST and to assess the risk factors associated with this entity.