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Letter to Editor

Radiology Section

Letter Regarding Article, 'Unusual Presentation of Dengue Fever Cerebral Venous Thrombosis'

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Dear Editor,

I read with great interest the article by Vasanthi et al., reporting a patient of Cerebral Venous Sinus Thrombosis (CVST) in association with dengue fever [1]. The patient they described had presented with Intracranial Hypertension (ICH) symptoms and cranial Magnetic Resonance Venography (MRV) had showed disruption of flow in bilateral transverse sinus. However, following solely hydration therapy, his symptoms was totally improved as well as complete recovery of bilateral transverse sinus was demonstrated after two weeks period. In conclusion, they postulated the diagnosis of CVST developing secondary to dehydration on the background of dengue fever and suggested proper hydration therapy without anticoagulation as an adequate type of treatment in CVST. I agree with the interesting aspect of this case, however, I would like to comment this report in some aspects as well as raise some issues for clarification and discussions by the authors.

First, the diagnosis of CVST may be questioned in several aspects. As they stated, I agree that presentation of ICH symptoms and results of flow interruption in bilateral transverse sinus on MRV would firstly suggest the diagnosis of CVST and secondary ICH. First MRV of the patient had showed bilateral, symmetrical disruption of luminal filling, however, following a very short time interval (2 weeks), luminal calibrations were shown to be totally recovered, even though without administration of anticoagulation therapy which was atypical for the course of CVST. Supporting this view, the imagining appearance of MRV abnormalities has been reported to continue over a long term period [2]. Taken together the rapid recovery of MRV features and clinical course of the patient, I think that the diagnosis of secondary bilateral transverse sinus stenosis due to increased ICH should have to be considered prior [3,4]. Of note, this entity has been several times reported and recovery by Cerebrospinal Fluid (CSF) drainage methods has been demonstrated clearly [3-5]. In this case, a probable dengue meningitis might have resulted in elevation of intracranial pressure disrupting the CSF absorption and as previously hypothesized this pressure increase might have caused secondary stenosis of transverse sinuses [3-5]. The main mechanism underlying recovery of the patient might rather be associated with the lumbar puncture performed in the interval period which could have provided normalization of ICH resulting in the recovery of secondary sinus stenosis and the clinical outcome. In my opinion, giving the results of conventional MRI sequences of the patient showing the anatomy of transverse sinus lumen as well as brain parenchyma and meninges needs to clarify these arguments.

Second, even assuming CVST as the diagnosis, there may be some questions concerning the evaluation of the patient. For instance, in CVST, anticoagulation constitutes the first line therapy even in the circumstances of CVST haemorrhage [6,7]. The authors explain the reason for not administrating the anticoagulation therapy by virtue of the patient's gradual improvement on hydration therapy; and as a result, they emphasize efficiency of solely hydration therapy without anticoagulation in CVST. Probably, such a conclusion which is totally conflicting with literature knowledge may give misunderstandings regarding the therapeutic approach of CVST.

In conclusion, I point out transverse sinus stenosis as a crucial differential diagnosis to be kept in mind among clinicians in which rapid and dramatical recovery of sinus stenosis can be achieved by CSF drainage. Although, I still think that this report demonstrates a crucial illustration of the recovery of ICH in accordance with the concurrently performed MRVs, re-evaluation of some aspects according to the comments above mentioned will probably give a better understanding of the reports as well as adds critical perspectives about the underlying patho-mechanisms.

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