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Introduction

Cerebral sinovenous thrombosis (CSVT) has been proposed in legal settings to be an atraumatic mimic of abusive head trauma (AHT).

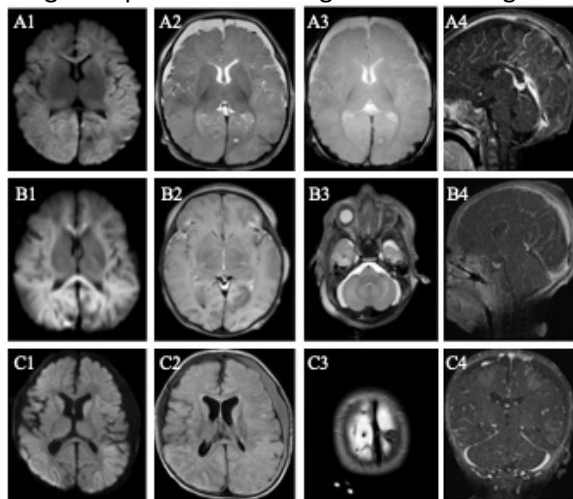
Objective: Determine the prevalence of CSVT and subdural hemorrhage (SDH) in a large AHT population <18y.

Methods

A retrospective cohort study was conducted to measure the prevalence of CSVT and SDH on MR venograms of 243 patients diagnosed with AHT at a single center. The presence of additional intra- and extracranial injuries, head injury severity, and hospital and PICU lengths of stay were also reported. Study protocol (20-2876) approved by the CO Multiple IRB.

Intracranial MR Venograms

Fig 1. Representative Diagnostic MR Images



A-C 1) Axial diffusion weighted imaging

A2) Axial T2-weighted
 B2) Axial T2-weighted at internal capsule
 C2) Axial fluid-attenuated inversion recovery

A3) Axial T2-weighted gradient echo sequence
 B3) Axial T2-weighted at cerebellum
 C3) Axial T2-weighted

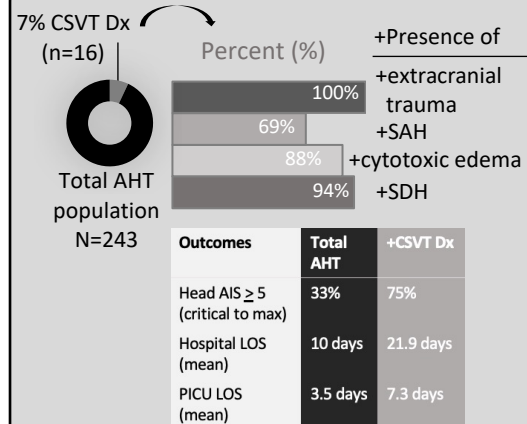
A-B 4) Sagittal contrast-enhanced T1-weighted
 C4) Coronal contrast-enhanced T1-weighted

A) Bilateral subdural hematomas and a single thrombus in the mid- and posterior superior sagittal sinus

B) Subdural hematoma and single thrombus in the posterior superior sagittal sinus

C) Subdural hematoma and two thrombi within the mid-superior sagittal sinus, both extending from an injured bridging vein

Results



Conclusion

CSVT was present in the minority of AHT cases examined, but SDH was present in most of those cases.

CSVT was associated with:

- additional traumatic injuries
- greater head injury severity
- longer hospital and PICU stays