Incidence of cavum septum pellucidum on CT in patients referred from memory clinic – an observational pilot study

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Introduction & Aims

Septum Pellucidum

- Double-membrane separating the frontal horns of the lateral ventricles of the brain [1]

Cavum Septum Pellucidum (CSP)

- Potential space between these membranes
- 85% of Neonates, fuses in childhood
- **Persistent CSP associated with psychiatric disorders** [2]

Chronic Traumatic Encephalopathy (CTE)

- Neurodegenerative condition affecting, particularly, retired athletes who experienced **repetitive, low impact head trauma** [3]

Radiological CSP has been evaluated as a potential in-vivo biomarker for CTE [3]

Our study evaluated the incidence of radiological CSP among an unselected cohort undergoing investigation for cognitive impairment in memory clinic.

Methods & Results

List of patient Community Health Index (CHI) numbers corresponding to patients referred for CT brain

Community memory clinic in North West Glasgow between October 2019 and March 2020

Approval for use of imaging for research purposes was granted

Images viewed by first author following a session from second author on basic relevant anatomy.

Positive case defined as one with visible CSP.

Twenty-eight (n=28) cases reviewed. CSP was observed in one (n=1) case.

Discussion

This study was a pilot within a group in the early stages of planning a study of imaging of individuals known to have CTE.

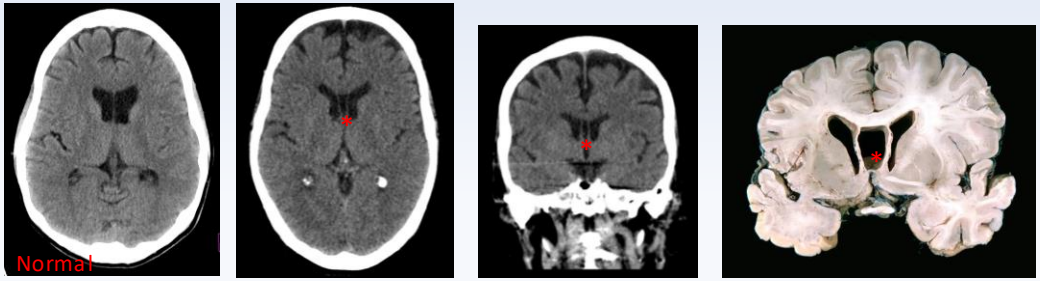
We included **unselected patients** undergoing investigation of cognitive impairment.

While this study **does not involve review of the personal history of the subjects**, it includes a cohort with relevant symptoms.

It may prove insightful to review the history of the individual identified as a positive case.

Further evidence is required to establish CSP as a reliable in-vivo biomarker for CTE.

We included CT only, while current evidence makes observations on MRI [3]. Locally, CT is utilised in the first instance.



[1] Das et al, in StatPearls [Internet], 2022
[2] Wang et al, J Neuropsychiatry Clin Neurosci. 2020; 32(2):175-184
[3] Alosco et al Neurotherapeutics. 2021; 18(2):772-791
Images – Radiopaedia.org – Normal CT brain; Cavum septum pellucidum

NHS Greater Glasgow and Clyde