Prevalence, sensitivity, and specificity of chronic cerebrospinal venous insufficiency in MS.

Prevalence, sensitivity, and specificity of chronic cerebrospinal venous insufficiency in MS.

Submitted by gcaudle2 on Mon, 08/19/2013 - 3:02pm

Title
Prevalence, sensitivity, and specificity of chronic cerebrospinal venous insufficiency in MS.

Publication Type
Journal Article

Year of Publication
2011

Authors

Journal
Neurology

Volume
77

Issue
2

Pagination
138-44

Date Published
2011 Jul 12

ISSN
1526-632X

Keywords
Adult, Aged, Chronic Disease, Cohort Studies, Cross-Sectional Studies, Disability Evaluation, Echocardiography, Doppler, Color, Female, Humans, Male, Middle Aged, Multiple Sclerosis, Prevalence, Sensitivity and Specificity, Ultrasonography, Doppler, Color, Venous Insufficiency

Abstract

BACKGROUND: Chronic cerebrospinal venous insufficiency (CCSVI) was recently described in patients with multiple sclerosis (MS). A subject is considered CCSVI positive if ≥ 2 venous hemodynamic (VH) criteria are fulfilled.

OBJECTIVE: To determine prevalence of CCSVI in a large cohort of patients with MS, clinically isolated syndrome (CIS), other neurologic diseases (OND), and healthy controls (HC), using specific proposed echo-color Doppler (ECD) criteria.

METHODS: Transcranial and extracranial ECD were carried out in 499 enrolled subjects (289 MS, 163 HC, 26 OND, 21 CIS). Prevalence rates for CCSVI were calculated in 3 ways: first, using only the subjects for whom diagnosis was certain (i.e., borderline subjects were excluded); secondly, including the borderline subjects in the "no CCSVI" group; and finally, taking into account subjects who presented any of the VH criteria.

RESULTS: CCSVI prevalence with borderline cases included in the "no CCSVI" group was 56.1% in MS, 42.3% in OND, 38.1% in CIS, and 22.7% in HC (p < 0.001). The CCSVI prevalence figures were 62.5% for MS, 45.8% for OND, 42.1% for CIS, and 25.5% for HC when borderline cases were excluded (p < 0.001). The prevalence of one or more positive VH criteria was the highest
in MS (81.3%), followed by CIS (76.2%), OND (65.4%), and HC (55.2%) (p < 0.001). CCSVI prevalence was higher in patients with progressive than in nonprogressive MS (p = 0.004).

CONCLUSIONS: Our findings are consistent with an increased prevalence of CCSVI in MS but with modest sensitivity/specificity. Our findings point against CCSVI having a primary causative role in the development of MS.

DOI 10.1212/WNL.0b013e318212a901
Alternate Journal Neurology
PubMed ID 21490322