

Prevalence of internal jugular vein abnormalities on contrast-enhanced 3D T1 GRE MR images in patients with multiple sclerosis in comparison to control group

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Introduction: The purpose of this study was to assess the prevalence of internal jugular vein (IJV) stenosis in patients with multiple sclerosis (MS) in comparison to control group (CG).

Materials & Methods: MR studies of 100 patients imaged with contrast-enhanced 3DT1GRE sequence (1.5T Siemens, Avanto) were retrospectively reviewed. The study group consisted of 50 patients with confirmed MS (18 men, 32 women; mean age-47.3) and 50 patients in control group (22 men, 28 women; mean age-44.8), referred for MRI for following indications: suspected intracranial tumor (n=18), epilepsy (n=12), suspected vascular disease (n=10), headaches (n=2), other (n=8). The presence of internal jugular vein stenosis was assessed by two radiologists experienced in MR imaging, separately for the upper, middle and midlower segment (distal, lower IJV was not included in examination in CG and was not evaluated). Cases of interobserver disagreement were resolved by consensus. Data were compared between groups using U Mann-Whitney test.

Results: In upper segment of IJV 46 stenoses (compression by C1 lateral mass) were noted in MS patients and 52 in CG ($p > 0.05$); in middle section of IJV there were 20 stenoses (carotid compression) in MS group, compared to 22 in CG ($p > 0.05$) and in midlower portion of IJV 17 stenoses (compression by sternocleidomastoid muscle) was seen in MS patients and 3 in CG ($p < 0.05$).

Discussion & Conclusion: There was no statistical significance in the prevalence of stenosis in the upper and middle segments of IJV, between MS and control group. In the mid-lower part of IVC the stenoses were significantly more frequent in MS group.

References:

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