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213. THE CEREBROSPINAL FLUID FLOW QUANTIFICATION IN PATIENTS WITH HEADACHE

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Introduction: Headache disorders are among the most common disorders of the nervous system. Migraine on its own is the cause of 1,3% of all years of life lost to disability. The aim of this study was to determine whether there are disorders in cerebrospinal fluid dynamics in patients with migraine according to its severity. The objectives were to evaluate the cerebrospinal fluid flow parameters in patients with migraine and affective disorders and also between different subgroups of migraine.

Materials and methods: Sixty patients hospitalized in the Institute of Neurology and Neurosurgery were included in this study: 44 patients with migraine and 16 patients with affective disorders (as case control). Subjects were divided in the following groups: by diagnosis (migraine or affective disorders), by the type of migraine (episodic or chronic, with or without drug abuse), by age (19-25 years, 26-44 years and ≥ 45 years), by sex, by the disease duration (1-5 years, 6-15 years and ≥ 16 years). At this level, peak flow velocity (cm/s), average flow velocity (cm/s), volumes in cranial and caudal directions (ml), net volume (ml) and aqueductal area (mm²) were studied.

Results: There was a statistically significant difference in forward volume between the diagnosis group of migraine and affective disorders; in peak velocity and forward volume between the chronic and episodic migraine. Statistically significant differences were not detected in flow parameters between migraine with or without drug abuse. Also there was a statistically significant difference in peak velocity, forward volume, reverse volume and net volume between the age group of 19-25 years and the older age groups; in peak velocity and reverse volume between the sexes group; in peak velocity, forward volume and reverse volume between the disease duration group of 1-5 years and other disease duration groups.

Conclusion: When using cine - phase contrast MRI in the cerebral aqueduct the flow parameters were higher in subjects with migraine (only the forward volume showed a statistically significant difference), especially chronic migraine (only peak velocity and forward volume showed statistically significant difference between type of migraine groups), in subjects aged 19-25 years than those in older age groups (peak velocity, forward, reverse and net volumes showed statistically significant difference), in male subjects (peak velocity and reverse volume showed statistically significant difference) and in subjects with disease duration of 1-5 years than those in older groups (peak velocity, forward and reverse volumes with statistically significant difference).

Key words: cerebrospinal fluid flow, migraine, phase - contrast MRI.