Cognitive performance in patients with chronic spontaneous urticaria: computer-based assessment of selective attention and episodic memory

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Introduction & Objectives: Patients with chronic spontaneous urticaria (CSU) may suffer from cognitive impairment due to disease-related histamine release or to treatment with H1-receptor antagonists. Both factors may have an impact on the cerebral histaminergic system with effects on attention and memory performance consequently compromising driving or working ability. This may particularly apply to the great number of patients, in whom the licensed dosage for H1-receptor antagonists is exceeded in order to achieve disease control. In a large naturalistic cross-sectional study we assess cognitive performance in outpatients with CSU.

Material & Methods: The patients are assessed at various dermatological outpatient clinics. Sociodemographic data, history and current medication are taken. Severity of disease is determined by means of the Urticaria Activity Score (UAS7) and the Urticaria Control Test (UCT), quality of life by the Chronic-Urticaria-Quality-of-Life questionnaire (CU-Q20L) and the Dermatology Life Quality Index (DLQI), severity of depressive symptoms by the Beck Depression Inventory 2 (BDI II). Cognitive performance is studied by means of the computer-based Memory and Attention Test (MAT). This test allows a standardized quantitative assessment of three cognitive domains (selective attention, episodic working memory and episodic short-term memory) and has been evaluated in various patient groups suffering from cognitive impairment.

Results: We present the findings in the first 72 consecutively assessed CSU patients. They were 48 women and 24 men at ages between 19 and 72 years (mean/SD: 48/15). Of these patients, 63 were under treatment with antihistamines, 50 at dosages exceeding the licensed dosage. The patients had UAS7 scores between 0 and 42 (mean/SD: 12/13) and UCT scores between 0 and 16 (mean/SD: 9/5). About 60 % of them had a poorly controlled disease. The measured CU-Q20L scores were between 0 and 84 (mean/SD: 32/21), the DLQI scores were between 0 and 27 (mean/SD: 6/7). BDI-II scores (mean/SD: 11/11) indicated that more than 30 % of the patients suffered from mild to severe depressive symptoms. More than 40 % of the patients had a percent rank of less than 16 in one cognitive domain, more than 30 % in two cognitive domains and about 5 % in all three cognitive domains studied. About 15 % of the patients under antihistaminergic treatment suffered from an impairment in selective attention, the majority of them were in the high-dose group.

Conclusions: About 10 - 15 % of the patients with CSU suffer from a substantial impairment of attention, which may be suited to impair driving and working ability. Treatment with H1-receptor antagonists, particularly when exceeding the licensed dosage, may significantly contribute to this impairment.