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CLUSTER HEADACHE AND CHRONIC PAROXYSMAL HEMICRANIA ARE CHARACTERIZED BY DIFFERENT MORPHOLOGICAL ASPECTS OF NASAL MUCOSA.

A. Costa, F. Antonaci, G. Broich, F. Ottaviani*, A.R. Botticelli**, G. Barbolini**, G. Nappi.*

Headache Centre, Institute of Neurology, University of Pavia; * Dept. of Otorhinolaryngology I, University of Milan; ** Institute of Pathology, University of Modena, ITALY.

Cluster headache (CH) and chronic paroxysmal hemicrania (CPH) are often associated with nasal symptoms, such as stuffiness (nasal congestion) and rhinorrhea, during the attacks. In this study, we have evaluated the morphological aspects of nasal mucosa in 5 CH patients (2 with episodic CH in period, and 3 with chronic CH) and 3 CPH patients, diagnosed according to the IHS criteria. All patients, who suffered from daily attacks, were studied in pain-free intervals. None of them was on prophylactic treatments; their mean \pm SD age was 40 ± 5.6 years. Five healthy subjects, sex and age-matched, served as controls. After a thorough anterior rhinoscopy, to rule out endonasal pathology or malformations, nasal mucosa was obtained from the head of the middle turbinate of either side without anesthesia. The procedure caused little discomfort, and in no case tamponade was required. Morphological evaluation was performed on $5 \mu\text{m}$ paraffin sections (fixed in 10% calcium-acetate formalin, pH 7.0), with hematoxylin-eosin. In both headache groups, the presence of edema was observed bilaterally, with a prevalence on the painful side, and appeared to be more pronounced in episodic than chronic CH patients. In all CH patients we found reduced glandular component of nasal mucosa, partly due to hypotrophy and fibrosis, particularly in the 3 chronic CH patients and on the painful side. In CPH patients, a great number of eosinophils was observed on the symptomatic side, along with mast cells in one patient and diffuse lymphocytes in another patient. Examination revealed in all cases moderate to massive ialinosis on the non symptomatic side, in the absence of eosinophils. These findings suggest that CPH may be associated with immuno-allergic phenomena with possible deposition of antigen-antibody complexes in nasal mucosa, which may be relevant to either nasal symptoms, or more generally to the mechanisms of the disorder. In addition, involvement of nasal mucosa may be bilateral, as the presence of ialinosis on the non symptomatic side suggests possible evolution of the process. These changes do not appear to be associated with CH; thus, CH and CPH may differ in the pathogenetical mechanisms.