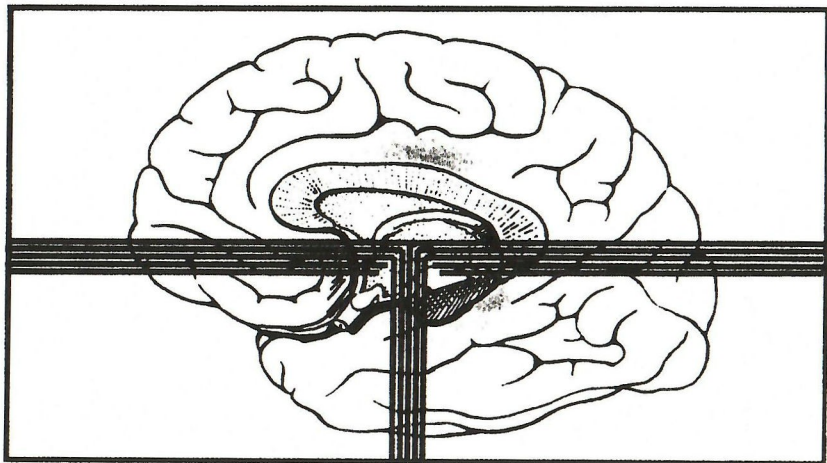
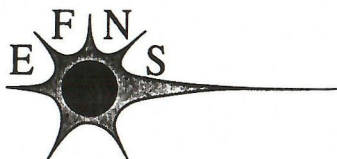


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**Abstracts**



Title of Abstract:	<b>NASAL MUCOSA IN CLUSTER HEADACHE: MORPHOLOGICAL CHANGES AND CONTENT OF VASOACTIVE SUBSTANCES.</b>
Authors:	<b>Martignoni E., Botticelli A.R., Barbolini A., Broich G., Costa A., Ottaviani F., Nappi G.</b>
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Text:	<p>Cluster Headache (CH) is a primary headache characterized by peculiar pattern of activity and symptom profile of attacks. The mechanisms underlying nasal congestion and rhinorrhea, symptoms most frequently experienced during the attacks, are still poorly understood. We evaluated the morphological aspects of nasal mucosa obtained from either side in 5 male patients suffering from CH, namely 2 episodic CH (active phase) and 3 chronic CH, according to the criteria of the International Headache Society (IHS). The mean <math>\pm</math> SD age of patients was <math>34.2 \pm 2.6</math> years, and the duration of disease was <math>6.4 \pm 4.3</math> years. None of them was on prophylactic treatments. Nasal mucosa was obtained from the middle turbinate after a thorough anterior rhinoscopy to rule out endonasal pathology. Hystological sections obtained by means of cryostat at <math>-10^{\circ}\text{C}</math> were fixed in 10% calcium acetate formalin (pH 7). We also measured tissue content of substance P (SP) and the vasoactive peptides neuropeptide Y (NPY), calcitonin gene-related peptide (CGRP) and vasoactive intestinal polypeptide (VIP) by immunohistochemistry. A brown coloured final product was developed using an Avidin-Biotin immunoperoxidase reagent. The morphological study revealed a reduced glandular component, due to hypotrophy and fibrosis of serosal glands on both sides. We found no change in VIP and CGRP content, whereas a clear decrease in SP and NPY content in the nerve endings was observed in all CH patients. This was seen to be more pronounced on the side of the usual pain attacks. These data suggest that in CH the occurrence of rhinorrhea may not reflect increased activity of serosal glands, but rather oedematous/vasomotor phenomena located in the turbinate. The reduced SP content in the nerve endings of nasal mucosa further supports the involvement of this mediator in the pathogenesis of pain and vascular reactivity in CH. In addition, the finding of decreased NPY content in nasal mucosa is compatible with impaired control of the vascular tone in CH patients.</p>
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