No Change in Interictal PACAP Levels in Peripheral Blood in Women With Chronic Migraine

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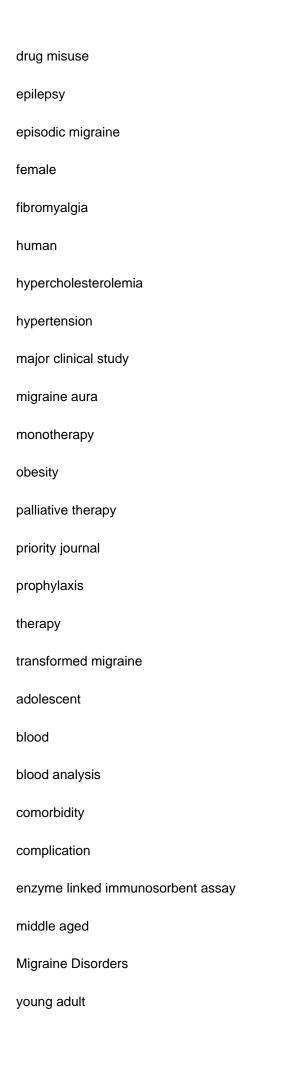
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Objective: To determine total pituitary adenylate cyclase activating polypeptide (PACAP) in peripheral blood as a potential marker of the activation of the parasympathetic arm of the trigemino-vascular system in chronic migraine (CM) in a case-control study. Methods: Women older than 17 and diagnosed as CM were recruited. Healthy women with no headache history and women with episodic migraine (EM) served as control groups. Total PACAP and vasoactive intestinal peptide (VIP) levels were determined in blood samples obtained from the right antecubital vein by ELISA outside a migraine attack and having taken no symptomatic medication the day before. Results: We assessed serum samples from 86 women with CM, 32 healthy women, and 35 women with EM. There were no differences in PACAP levels in CM patients (109.8 ± 43.8, 97.4 [32.5?253.1] pg/mL), controls  $(108.7 \pm 43.0, 98.7)$  [50.7?197.3] pg/mL), or EM patients  $(98.8 \pm 34.3, 98.7)$ 94.2 [52.0?190.7] pg/mL). VIP levels were significantly increased (P = .027) in CM as compared to control healthy women  $(136.0 \pm 111.5 \text{ pg/mL}; 103.1 [20.5?534.0] \text{ pg/mL vs } 88.6 \pm 61.0 \text{ pg/mL}; 66.0$ [21.1?256.1]) and EM patients (103.0  $\pm$  56.7 pg/mL; 103.5 [15.2?263.0] pg/mL). In the range of this study variables such as age, CM duration, the presence of aura, analgesic overuse, depression, fibromyalgia, vascular risk factors, history of triptan consumption or kind of preventative treatment did not significantly influence PACAP or VIP levels. Conclusion: In contrast to VIP, interictal PACAP level measured in peripheral blood does not seem to be a biomarker reflecting parasympathetic activation in CM. © 2016 American Headache Society

chronic migraine
pituitary adenylate cyclase activating polypeptide
trigemino-vascular system
vasoactive intestinal peptide
analgesic agent
beta adrenergic receptor blocking agent
biological marker
candesartan
hypophysis adenylate cyclase activating polypeptide
lisinopril
serotonin uptake inhibitor
topiramate
valproic acid
vasoactive intestinal polypeptide
zonisamide
ADCYAP1 protein, human
biological marker
hypophysis adenylate cyclase activating polypeptide
adult
age
Article
asthma
case control study
controlled study
depression
disease duration



Adolescent
Adult
Biomarkers
Blood Chemical Analysis
Case-Control Studies
Comorbidity
Enzyme-Linked Immunosorbent Assay
Female
Humans
Middle Aged
Migraine Disorders
Pituitary Adenylate Cyclase-Activating Polypeptide
Young Adult