

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

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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 ± 43.0 , $98.7 [50.7-197.3]$ pg/mL), or EM patients (98.8 ± 34.3 , $94.2 [52.0-190.7]$ pg/mL). VIP levels were significantly increased ($P = .027$) in CM as compared to control healthy women (136.0 ± 111.5 pg/mL; $103.1 [20.5-534.0]$ pg/mL vs 88.6 ± 61.0 pg/mL; $66.0 [21.1-256.1]$) and EM patients (103.0 ± 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

drug misuse

epilepsy

episodic migraine

female

fibromyalgia

human

hypercholesterolemia

hypertension

major clinical study

migraine aura

monotherapy

obesity

palliative therapy

priority journal

prophylaxis

therapy

transformed migraine

adolescent

blood

blood analysis

comorbidity

complication

enzyme linked immunosorbent assay

middle aged

Migraine Disorders

young adult

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