LOW PLASMA ADRENOMEDULLIN LEVELS DURING ATTACK AND NON-ATTACK PERIODS MAY HAVE A ROLE IN MIGRAINE

A. Akcali[1], S. Geyik[2], M.I. Dogru[3], A. Dogru[3], M. Yurekli[4], A. Neyal[5], A. Balat[6], A.M. Neyal[1]

[1]*Gaziantep University, Medical School, Department of Neurology, Gaziantep,*
[2]*Gaziantep Medical Park Hospital, Neurology Clinic, Gaziantep*
[3]*Aksaray University, Faculty of Science and Letters, Department of Biology, Aksaray*
[4]*Inonu University, Faculty of Science and Letters, Department of Biology, Malatya*
[5]*T.C. Ministry of Health Dr. Ersin Arslan, Public Hospital, Neurology Clinic, Gaziantep*
[6]*Gaziantep University, Medical School, Department of Pediatrics, Gaziantep, Turkey*

Adrenomedullin (AM), a multifunctional peptide, is considered as a member of the calcitonin/CGRP/amylin family. Pivotal role of CGRP in pain has long been recognized and its role in migraine mechanisms attracted attention in the recent years. AM was also suggested to have a possible role in migraine pathophysiology. A recent study revealed that AM infusion did not trigger migraine attacks. However it is not clarified yet whether its alterations in any way may influence the natural course of migraine attacks.

In the present study, the plasma adrenomedullin levels of 26 migraine patients were evaluated in attack and non-attack periods, and were compared with the plasma AM levels of healthy controls.

Mean plasma AM levels were found to be 19 pmol/L (14.65 - 25.48 pmol/L) during attack periods and 25.23 pmol/L (20.08 - 30.98 pmol/L) in non-attack periods in migraine patients and 33 pmol/L (22.47 - 41.09 pmol/L) in the control group. AM levels of migraine patients were significantly lower during non-attack periods ($p=0.001$) and more interestingly, it further decreased during the attacks ($p=0.001$).

Our findings indicate persistently low AM plasma levels in migraine cases. The lower AM levels in migraine patients in non-attack periods and even lower levels during attacks gave the impression that AM might have an important role in migraine. Further studies regarding on AM involvement in migraine pathophysiology are needed to confirm these results.