ELEVATED PLASMA TOTAL NITRITE LEVELS MAY BE RELEVANT WITH MIGRAINE ATTACKS

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Existing data in means of NO involvement in migraine are mostly obtained from the observations that NO donors may provoke migraine attacks and through the studies that was conducted in NO induced headache attacks in healthy subjects and primary headache cases. Findings in provoked attacks may don't tell us the full story about the role of NO pathways in the natural course of migraine.
We measured the plasma nitrite levels in migraine cases in both with and without attacks to determine if they differ from the controls in terms of plasma nitrite levels, in either attack or attack-free periods.
The plasma samples of 26 patients with the diagnosis of migraine during attacks and attack-free periods were compared with 26 healthy controls. Mean plasma total nitrite levels of migraine patients during attacks and attack-free periods and of controls were 36.5 micromole/L, 27.81 micromole /L and 25.19 micromole /L, respectively. These results demonstrate that total nitrite levels of migraineurs during attacks were significantly higher than those of during attack-free periods and also than those of controls ($p=0.001$ and $p=0.001$, respectively). No significant difference was observed between migraineurs during attack-free periods and controls in this regard ($p=0.534$).
According to these results, we suggest that NO pathway may play a key role in the natural course of migraine attacks. NO may be involved in varied mechanisms in migraine. However, NO involvement in migraine is the cause or the consequence, is not clear yet.