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Poster Presentation

Effects of Vitamin D on Migraine

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Abstract

Migraine is a disabling headache disorder. That is characterized by recurrent unilateral pulsatile headaches. It is one of the most common neurological disorder in the world that nearly one billion of people are affected by migraines. The main Migraine's features are headaches. Accompanying symptoms are nausea, sometimes vomiting, photophobia, neck pain and muscle tension. Its attacks last several hours to 2-3 days. Migraines are believed to be related to a mixture of environmental and genetic factors. Neuroinflammation is caused by a variety of cues. It results in the release of neuropeptides which affect vascular permeability and helps to initiate proinflammatory and immune reactions at the site of injury. In Migraines calcitonin gene-related protein (CGRP) is released from perivascular nerve endings. CGRP and other factors induce arterial relaxation, thus inflammation occurs. Vitamin D is a very important compound in the human body. Nowadays vitamin D deficiency has become a worldwide problem. Vitamin D has several roles in the body, In addition to regulation of calcium and phosphorus serum level, which is important for bone health, vitamin D has a significant role in brain's growth, development, and function. In recent years it has been hypothesized that there is a relationship between vitamin D deficiency and migraine. The objective of this study was to review different paradigm on how vitamin D deficiency and migraines are correlated. In conclusion, recent studies have been shown there is an association between vitamin D deficiency and migraine. There is not any evidence to prove the cause of this effect but we hypothesize that the effect of vitamin D may be related to increasing calcium serum level which has a significant role in healthy brain function and suggest further study especially on inflammatory processes involved in these situations.

Keywords: Migraine, Vitamin D, CGRP, Neuroinflammation

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