

Dehydroepiandrosterone sulfate deficiency in chronic fatigue syndrome

H Kuratsune ¹, K Yamaguti, M Sawada, S Kodate, T Machii, Y Kanakura, T Kitani

Affiliations [expand](#)

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Abstract

The chronic fatigue syndrome (CFS) is a condition of unknown etiology, characterized by a persistent debilitating fatigue, the muscle-related symptoms and the neuropsychiatric symptoms. Recently, it has been reported that the patients with CFS might have impaired activation of the hypothalamic-pituitary-adrenal axis, and suggested that a part of the patho-genesis of CFS might be associated with abnormalities of the endocrine system. Herein, we show that the majority of Japanese patients with CFS had a serum dehydroepiandrosterone sulfate (DHEA-S) deficiency. Serum DHEA-S is one of the most abundantly produced hormones which is secreted from the adrenal glands, and its physiological function is thought to be a precursor of sex steroids. DHEA-S has recently been shown to have physiological properties, such as neurosteroids, which are associated with such psychophysiological phenomena as memory, stress, anxiety, sleep and depression. Therefore, the deficiency of DHEA-S might be related to the neuropsychiatric symptoms in patients with CFS.

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