Mechanisms behind recurrent pain in children due to stress clarified

G Alfvén¹, S Grillner¹ and E Andersson¹,²
¹Karolinska Institute, Sweden
²Martina Children’s Hospital, Sweden
³Swedish School of Sport and Health Sciences – KI, Sweden

We present a novel and a missing link, regarding central and peripheral neurophysiological changes, which are of significant importance for understanding recurrent pain of stress origin. Stressors evoke stress response in neural structures including the amygdala, which can trigger and potentiate the startle reaction. In 19 children with recurrent psychosomatic pain in the head, neck and abdomen, we found an electromyographic (EMG) study, the startle reaction to be potentiated, more easily and more often elicited in several muscles related to the pain, as compared to 21 matched controls (1) The children were diagnosed according to strictly defined criteria (2) Increased cortisol (3) And decreased oxytocin secretion (4) In these children are in accordance with findings of the right dominance in stress in the bi-cameral brain (5) These facts must be considered in the treatment of patients with psychosomatic pain.

Notes: