Abstract


Coenzyme Q10 concentration in plasma and blood cells of juvenile patients hospitalized for anorexia nervosa.


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OBJECTIVE: The antioxidant status of coenzyme Q10 (CoQ10) was investigated in plasma, erythrocytes, and platelets of juvenile patients with anorexia nervosa.

METHODS: Blood for analysis of the CoQ10 status was taken from 16 juvenile patients suffering from anorexia nervosa (restricting form) at the time point of admission to the hospital and at discharge after about 12 weeks. Plasma and blood cells isolated by a density gradient were stored at -84 °C until analysis. CoQ10 concentration and redox status were measured by high pressure liquid chromatography with electrochemical detection and internal standardization. The improvement of physical health during the hospital refeeding process was followed up by the body mass index (BMI).

RESULTS AND CONCLUSION: The antioxidant status of plasma CoQ10 in juvenile patients suffering from anorexia nervosa indicated no abnormalities in comparison to healthy controls. However, the decreased concentration of CoQ10 observed in platelets at the time point of hospital admission may represent mitochondrial CoQ10 depletion. This initial deficit improved during the hospital refeeding process. The platelet CoQ10 concentration showed a positive correlation to the BMI of the patients.

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