
Infection-associated decrease of serum creatine kinase levels in Fukuyama congenital muscular dystrophy

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Abstract

Background: Marked decreases in serum creatine kinase levels have been noted in Duchenne and Becker muscular dystrophies as rare complications of autoimmune or autoinflammatory diseases.

Subjects and methods: The influence of systemic inflammation on serum creatine kinase levels was reviewed from the charts of three subjects with Fukuyama congenital muscular dystrophy.

Results: A total of 30 infectious events were identified. Elevated serum C-reactive protein levels coincided with decreased creatine kinase levels on 19 occasions. In one subject, administration of 2 mg/kg/d prednisolone for bronchial asthma resulted in a decrease in creatine kinase level on six other occasions.

Conclusion: Apart from an increase in endogenous cortisol secretion, certain inflammation-related molecules could play a role in mitigating muscle cell damage in Fukuyama congenital muscular dystrophy during febrile infectious episodes. Corticosteroids may be a promising agent for the treatment of muscular symptoms in this disorder.

Keywords: C-reactive protein; Creatine kinase; Fukuyama congenital muscular dystrophy; Infection; Inflammation; Steroid.

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