

Abstract

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Serum fatty acid proportions are altered during the year following acute Epstein-Barr virus infection.

Williams LL, Doody DM, Horrocks LA.

Department of Pediatrics, Ohio State University College of Medicine, Columbus.

OBJECTIVE AND METHODS: Because abnormal serum fatty acid (FA) proportions had been found at three months after infectious mononucleosis (IM) in a pilot study, serum total FA profiles of 20 normal college students were measured at monthly intervals for one year following an acute Epstein-Barr virus (EBV) infection.

RESULTS: Below normal proportions of arachidonic acid and a reversal of the usual serum ratio of linoleic and oleic acids were maximal during the third month after acute IM. These FA abnormalities coincided with the symptom of increased physical malaise, despite apparent clinical recovery, common after IM. Persistence of low linoleic acid content beyond six months postinfection occurred in all seven students who showed continued clinical symptoms. Estimation of FA enzyme activities over the post-IM year suggested that FA elongation function was normal, but that FA desaturation enzyme activities were lower than normal, particularly early after EBV infection.

CONCLUSION: An inability of the host to normalize the serum total linoleic/oleic acid ratio may parallel a delayed recovery from EBV infection and may offer insight into its pathogenesis.

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