
**Association of familial Mediterranean fever and celiac disease in a 14-year-old girl with recurrent arthritis**

Sirs.

Celiac disease (CD) is an immune-mediated enteropathy associated with some autoimmune and inflammatory diseases (1). Familial Mediterranean fever (FMF) is a genetic inflammatory disease presenting with recurrent self-limiting attacks of joint, chest and abdominal pain associated with fever (2). FMF is also associated with several inflammatory diseases and vasculitides including inflammatory bowel disease, polyarteritis nodosa, Henoch-Schönlein purpura, and Behçet’s disease (2, 3). The factors underlying these associations are not completely understood. The FMF gene (MEVF) has been suggested to act as a modifier affecting the expression of other inflammatory diseases (3). MEFV encodes pyrin, which probably normally assists in controlling inflammation by deactivating the immune response. Defective pyrin results in uncontrolled inflammation (3). In FMF patients increased transcription of the proinflammatory cytokines (TNF-α, IL-6 and IL-8) has been reported (6). Cytokines also play role in the pathogenesis of CD by stimulating intestinal mucosal immune cells, leading to inflammation that induces the intestinal lesion (7, 8). Inflammation induced by FMF may trigger potentially pathogenic intra-epithelial lymphocytes, and in genetically susceptible individuals this may turn into persistent pathogenic signaling. Although the underlying mechanism is unclear, we hypothesize that interactions between immunological and genetic factors may play a key role in the association of these two disorders.

In Turkey, the prevalence of CD and FMF is 0.09% and 2.8/10,000, respectively (9, 10). The theoretical prevalence of both diseases in a single individual would be 0.25/100,000. This report is the first description of CD and FMF found in a child patient, but studies with larger populations are needed to investigate whether this coexistence is coincidental or whether a relationship between the two diseases actually exists.

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**References**