INFLAMMATORY SKIN DISEASES (OTHER THAN ATOPIC DERMATITIS & PSORIASIS)

USEFUL BIOMARKERS FOR DIAGNOSIS AND ESTIMATING DISEASE ACTIVITY OF EOSINOPHILIC FASCIITIS

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Introduction & Objectives: Eosinophilic fasciitis (EF) is a rare connective tissue disorder characterized by subacute onset of edema, erythema and induration on the extremities or trunk. Laboratory examination often reveals peripheral eosinophilia and high levels of serum aldolase. We performed a retrospective study about EF diagnosed in Gifu University Hospital for the last 11 years.

Patients: This study included 11 adult patients (4 males and 7 females) with a mean age of 56.0 years (range 24 to 72 years) at diagnosis.

Results: Nine out of 11 patients showed skin induration on the four extremities. It took an average of 8.5 months until the diagnosis was obtained. Only 3 patients had peripheral eosinophilia and 2 patients showed high serum levels of aldolase. We determined serum concentrations of CXCL9, CXCL10, TGFβ, and TIMP-1 at the onset. Although they were all elevated, they decreased after the treatment. MRI images showed markedly increased signal intensity within the fascia in 6 out of 7 EF patients. Histological findings showed the infiltration of lymphocytes, macrophages, and eosinophils in the fascia. In addition, mast cells were observed in the fascia. The lymphocytic infiltration was also observed in the perimysium. All patients were treated with prednisolone at initial doses of 10 - 80 mg/day, and 2 patients additionally received steroid pulse therapy. Furthermore, 5 patients were also given immunosuppressants. The symptoms improved in all patients by 3 - 4 months. However, when prednisolone was gradually tapered, skin induration and/or the difficulty of joint extending recurred in 2 patients.

Conclusions: Limitations of our study include its retrospective design and a small study size. Nevertheless, our observations showed that useful biomarkers are necessary for initial diagnosis and for estimating disease activity of EF and that serum concentrations of CXCL9, CXCL10, TGFβ, and TIMP-1 may be the useful candidates.