

Letters to the Editor

Antibody markers in patients with juvenile idiopathic arthritis: Two comments and a reply

Anti-filaggrin antibody in patients with juvenile idiopathic arthritis

Sirs,

Hromadníková *et al.* (1) recently reported that 30/60 (50%) of their patients with juvenile idiopathic arthritis (JIA) were positive for antikeratin antibody (AKA). The target of AKA and the closely related antiperinuclear factor (APF) is (pro)filaggrin (2,3). Variable results concerning the occurrence of AKA and APF in JIA have previously been reported by three different groups (4-6).

We report here on our findings concerning anti-filaggrin antibody (AFA) in patients with JIA. Filaggrin extracted from human skin was purified and used as antigen in an enzyme linked immunosorbent assay to measure IgG class AFA (7) in the sera of 160 patients with JIA and 93 healthy blood donors. There were 101 girls and 59 boys in the series. Their mean age at diagnosis was 6 years (range 0.9 - 15.2), the mean duration of the disease was 5.6 years (range 0-16) and the mean age was 11.5 years (range 1.8 - 25.3). The onset type was oligoarthritis in 93 cases, rheumatoid factor (RF)-negative polyarthritis in 54 cases, RF-positive polyarthritis in 2 cases, systemic arthritis in 6 cases, and enthesitis-related arthritis in 4 cases; data was not available for one case. When the cut-off limit for positivity was set at the 95th percentile in healthy blood donors, only four (2.5%) cases were positive for AFA. One positive patient had RF-negative polyarthritis, one patient had an oligoarthritis onset type and an RF-negative polyarthritis course type, and 2 patients had oligoarthritis. When using more strict criteria for positivity (99th percentile), our AFA assay equaled in sensitivity (47% of the cases positive) with AKA in patients with rheumatoid arthritis (RA) and was clearly more sensitive than AKA when the cut-off level was set at the 95th percentile (7). Very recently, a good correlation was reported between enzyme-linked immunosorbent assays using affinity purified filaggrin from human skin and deiminated recombinant filaggrin (readily available for large scale testing) as antigens (8).

We conclude that AFA, a highly specific marker for adult RA, is rare in patients with juvenile oligoarthritis or RF-negative polyarthritis. The underlying reason for the difference between our findings and those by Hromadníková *et al.* (1) may be the difficulty in properly interpreting the AKA im-

munofluorescence pattern or ethnic differences in the study populations. Favouring the first possibility is the fact that 2/2 of patients with psoriatic arthritis in the series of Hromadníková *et al.* were positive for AKA, whereas only one of our 17 patients with psoriatic arthritis was positive for AKA and none were positive for AFA (9). On the other hand, ethnic differences in the occurrence of marker antibodies of RA seem to exist as has been shown with regard to anti-RA33 (10).

T. PALOSUO, MD, Research Professor
R. NISSINEN, MA

A. SAVOLAINEN¹, MD

H. SÄILÄ¹, MD

K. AHO, MD, Professor

National Public Health Institute, Helsinki;

¹Rheumatism Foundation Hospital, Heinola, Finland.

Please address correspondence to: Dr. Timo Palosuo, National Public Health Institute, Mannerheimintie 166, FIN-00300 Helsinki, Finland. E-mail: timo.palosuo@ktl.fi

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Anti-keratin antibodies in patients with JIA

Sirs,

I read the paper by Hromadníková *et al.* with great interest, but I was wondering about the median age of the patients – which was 18.5 years, and in particular with a range of 4-44 years – in a pediatric patient group. The point should be raised that patients with still active disease a long time after the onset of the disease, which is what I have to assume is the case from the age range of the patients, represent a different subset of patients than patients in a pediatric rheumatology clinic aged 1-18 years. In addition, there were no age-matched controls in this study; the median age of the controls was 25.5 years, with a range of 21 to 50. The studied patients present a different age range.

The composition of the subsets in Hromadníková's cohort is also very unusual compared with the known pattern of JIA subsets. RF-negative and RF-positive JIA comprised the largest part of the patient group, and oligoarticular JIA, which normally represents the largest subset of JIA patients, was nearly absent.

The authors mention that the presence of AK is correlated with disease severity and near remission, but there is no definition of disease activity in their paper.

I therefore have some concerns as to how far the results of this paper, in its current form, are representative even of a small sample of JIA patients.

I. FOELDVARI, MD

Pediatric Rheumatologic Clinic am Allgemeinen Krankenhaus Eilbek, Friedrichsberger Str. 60, D-22081 Hamburg, Germany

Reply

Sirs,

In a recent paper we discussed the presence of anti-keratin antibodies (AKA) of the IgG class detected in the sera of patients with defined juvenile idiopathic arthritis (JIA) using an indirect immunofluorescence antibody test (ImmunoGlo™, Immco Diagnostics, Buffalo, USA), especially with regard to the relationship between the presence of AKA and disease severity and activity as well as specificity to a JIA category (1). As our cohort involved 60 patients (28 males and 32 females) aged 4 to 44 years