Antiperinuclear factor in chronic juvenile arthritis

Sir: Nesher et al recently described the first comprehensive series considering antiperinuclear factor (juvenile chronic arthritis) (JCA). They found an overall positivity of 34%; in patients with the polyarticular type of the disease 16/28 patients were positive.1 Our results are at variance with these data: in a group of 313 patients, only three were positive, all of them children with polyarticular onset (table). Thus our results are more in line with a recently reported Czechoslovakian series (Bardfeld R, 11th Prague international pediatric rheumatology symposium, 1992).

Our material consisted of 49 fresh and 264 frozen serum samples. One of the former and two of the latter were positive. As antiperinuclear factor is predominantly, if not exclusively, of the IgG class, sample preservation would seem unlikely to have influenced the results. A more plausible explanation for the discrepancy lies in the immunofluorescence system. A major confounding factor that may cause variability in antiperinuclear factor results is the variation in substrate sensitivity, between different donors, of the buccal cells that contain the antigen. This drawback has barred antiperinuclear factor from coming into general use despite the long history of the test.2 We used a recently described improved technique that includes detergent treatment of the cells, which is reported to minimise, albeit not completely, donor differences.3 We tested the serum samples at a standard dilution of 1:5,7 which is also the titre recorded for the WHO rheumatoid factor reference preparation that has been proposed by Feltkamp et al as the reference standard for antiperinuclear factor, too.6 Thirty per cent of serum samples from adult patients with rheumatoid arthritis tested in parallel by this technique were positive (manuscripts in preparation).

In conclusion, antiperinuclear factor seems to be a specific but insensitive marker for the JCA subset with polyarticular onset that resembles adult rheumatoid arthritis. It contributes to the evidence for a basic difference between JCA in general and adult rheumatoid arthritis. The need for a common reference standard in future studies is obvious.

ROBERT VON ESSEN
HEIKKI YLIOJI
ANNELI SAVOLAINEN
JARKKO HAAFSAAKI
ULLA-MAIJA OKSALA
Rheumatism Foundation Municipal SF–18120 Helsinki Finland

Patients with juvenile chronic arthritis

Onset type

Antiperinuclear factor positive

No of patients

Polyarticular

Rheumatoid factor positive

3/15

Rheumatoid factor negative

0/73

Oligoarticular

0/195

Systemic

0/50

Total

3/313


AUTHORS’ REPLY: We thank Drs von Essen et al for their comments. We share their view that there is an obvious need for a common reference standard for antiperinuclear factor studies.

Data from their study point to substantial differences in prevalence of antiperinuclear factor when compared with our results. Possibly, these variant results stem from the different methodologies which were applied: von Essen et al treated the buccal mucosa cells with detergents before the immunofluorescence with serum samples. This procedure did not decrease antiperinuclear factor antigen-antibody interactions in adult patients with rheumatoid arthritis (RA).1 It might do so in juvenile chronic arthritis (JCA), however, as characteristic of other autoantibodies in JCA, such as IgM rheumatoid factors, are different from those in adult RA.

Another possible explanation for the variant frequency of antiperinuclear factor might be a difference in its prevalence among various populations. As an example, preliminary results indicate antiperinuclear factor prevalence in 1:5 diluted serum samples of adult Israeli patients with RA in 40% (Nesher G, unpublished data), compared with 68–86% in European studies.1 It is possible that such differences exist between Scandinavian and American patients with JCA.

Several drawbacks, some of which are reported in these studies, prevent wider clinical use of antiperinuclear factor. Standardisation of the assay and evaluation of antiperinuclear factor’s presence in various populations might be two steps towards its common use.

GIDEON NESHER
Division of Rheumatology
Shaare-Zedek Medical Center
Jerusalem, Israel

TERRY L MOORE
Division of Rheumatology
St Louis University Medical Center
St Louis, MO 63104, USA

Correspondence to: Dr Moore.


Diagnostic role of antikeratin antibodies in RA

Sir: We read with interest the article by Paimela et al on the diagnostic and prognostic value of antikeratin antibodies in rheumatoid arthritis (RA).

We recently studied two groups with RA using indirect immunofluorescence for antibodies to the stratum corneum desmoglein (JSAM). In the group of white patients with RA (n=30) we found a seroprevalence for antikeratin antibodies of 53%. In contrast, among the African rheumatoid group (n=54), which had significantly more male predominance, an antikeratin antibody seroprevalence of 6% was seen. Our findings suggest that there may be a wide variation in the incidence of antikeratin antibodies, and even when immunofluorescence is used there is a low sensitivity, low negative predictive value, and a moderate specificity. There is also evidence that immunosorption of serum with heterologous nuclear RNP core protein A1, in which the C-terminal domain shows diagnostical homology with keratin, results in a significant reduction of antikeratin antibody titre.

Our view is that although antikeratin antibodies may be a clue to a subset of RA, these antibodies are of low discriminating ability when the disease is mild, as is often the case in early RA. Hence they are limited value for routine diagnostic purposes.

A.O. ADEBAJO
B L HAZLEMAN
Rheumatology Research Unit
Addenbrooke’s Hospital
Cambridge CB2 2QQ
United Kingdom

D G WILLIAMS
R N MAINI
Kennedy Institute of Rheumatology
Hammersmith
W12 9DF
United Kingdom


Salphasalazine induced hepatitis in adult Still’s disease

Sir: We were interested to read the report of salphasalazine induced hepatitis in juvenile chronic arthritis, noting that one of the two patients had the systemic onset variety.1

We report an adverse reaction to salphasalazine in a patient with adult Still’s disease and comment on a potential mechanism for enhanced drug toxicity in this disorder.

A 42 year old West Indian woman presented in November 1989 with malaise, weight loss, intermittent fever, and a symmetrical inflammatory polyarthritis with rash and a desquamating skin rash. Investigations showed a neutrophil leucocytosis (white cell count 15·8×10⁹/l) and a marked acute phase response (C reactive protein (CRP) 126 mg/l). Extensive screen for bacterial and viral infection was negative. A skin biopsy specimen showed perivascular polymorph infiltration compatible with a small vessel vasculitis. Carpal erosions were seen on wrist radiographs.

Diagnostic role of antikeratin antibodies in RA.

A O Adebajo, B L Hazleman, D G Williams and R N Maini

*Ann Rheum Dis* 1992 51: 1264
doi: 10.1136/ard.51.11.1264-c

Updated information and services can be found at:
http://ard.bmj.com/content/51/11/1264.3.citation

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

---

**Notes**

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/