some clinical samples, including a brain biopsy specimen from a patient with AIDS (unpublished observations). The results were extremely promising and suggest that diagnosis of toxoplasmosis using the PCR and DNA probes may soon become a routine alternative to serological tests.

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Evaluation of 3-fucosyl N-acetyllactosaminic antibody staining in histological assessment of CIN

Expression of 3-fucosyl N-acetyllactosaminic (CD15) antigen by non-keratinising squamous epithelia gives an indication of cell maturity and might therefore prove valuable in improving consistency of cervical intraepithelial neoplasia (CIN) grading.1-3 MC2 is a monoclonal antibody raised against human granulocytes4 which recognises the CD15 antigen. In biopsy specimens of normal cervix, the squamous epithelium shows a broad zone of staining in suprabasal cells; the depth of this MC2 stained zone progressively reduces with increasing severity of CIN grade.1

Thirty-six cervical biopsy specimens were examined by 11 consultant histopathologists: for each case there was a section stained with haematoxylin and eosin and a serial section stained for CD15 by an indirect avidin-biotin immunoperoxidase method. The pathologists initially graded the lesions using the haematoxylin and eosin section; thereafter the sections were regraded, but also now taking into account the CD15 stained section in an attempt to improve the consistency of diagnosis. Details of the proforma used for recording the results and the statistical analysis by k statistics have been described previously.5 The k statistics are a measure of overall agreement which do not require any assumption concerning a “gold standard” correct diagnosis. The statistical method includes a correction for the amount of agreement which could be expected by chance alone.

Table 1 presents the k statistics for agreement on the presence and degree of CIN. When the haematoxylin and eosin stained slides were studied alone overall agreement was fair (k=0.40), but this was largely due to good agreement on the CIN 3 and normal categories: the results for the CIN 1 and 2 categories showed poor agreement. Addition of the slide stained with CD15 resulted in slight reduction in the overall level of agreement (k=0.34). There was no improvement in the assessment of CIN grades 1 and 2 and there was a slight reduction in the level of agreement on those biopsy specimens which had been reported as normal. The table also gives the k statistics for agreement on the presence of viral features in the specimens. The level of agreement is poor with the haematoxylin and eosin stained section alone (k=0.18) and shows no improvement when the CD15 stained slide is also used in the assessment (k=0.14).

In a previous study we showed good agreement among histopathologists in the diagnosis of CIN 3 but not for the lesser grades of CIN.1 In view of the problems associated with interpreting cervical biopsy specimens using only a standard haematoxylin and eosin stained section and the reported suggestion that use of a CD15 stained section might improve discrimination, we had expected that this study would result in improved consistency of reporting. Although there seemed to be an association between a decrease in CD15 staining and increasing severity of CIN, the consistency of grading, unfortunately, did not improve significantly. The reasons for this are uncertain but may reflect a subconscious unwillingness on the part of the pathologist to be swayed diagnostically by a CD15 stained section, preferring instead to rely more on the well accepted use of the standard haematoxylin and eosin stained section. Alternatively, the localisation of CD15 may not have been sufficiently precise, or the antigen may have been dispersed too irregularly, to permit a critical distinction of the lower grades of CIN, the area of greatest diagnostic difficulty.

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Table 1. Kappa statistics

\[
\begin{array}{|c|c|c|c|c|c|}
\hline
\text{Agreement on CIN categories:} & \text{Normal} & \text{CIN1} & \text{CIN2} & \text{CIN3/\text{+}} & \text{Overall} \\
\hline
\text{Haematoxylin and eosin alone} & K & 0.48 & 0.08 & 0.20 & 0.64 & 0.40 \\
\text{Haematoxylin and eosin and MC2} & K & 0.33 & 0.11 & 0.13 & 0.66 & 0.34 \\
\text{Comparison} & K & 0.79 & 0.51 & 0.55 & 0.78 & 0.69 \\
\hline
\end{array}
\]

\[
\begin{array}{|c|c|c|c|c|c|}
\hline
\text{Agreement on viral features:} & \text{None} & \text{Outwith} & \text{Within} & \text{Both} & \text{Overall} \\
\hline
\text{Haematoxylin and eosin alone} & K & 0.19 & 0.20 & 0.20 & 0.59 \\
\text{Haematoxylin and eosin and MC2} & K & 0.17 & 0.16 & 0.08 & 0.14 \\
\text{Comparison} & K & 0.79 & 0.72 & 0.86 & 0.77 \\
\hline
\end{array}
\]
Serum IgE concentrations in complete Behcet's disease

Behcet's disease is a multisystem panvasculitis of unknown etiology.¹ An immune complex vasculitis is thought to be the basic pathological process in Behcet's disease. The type of the antigen which occurs in the formation of the immune complex is not yet clear.

This study was designed to clarify the pathogenesis of the disease and suggests a possible link between increased serum IgE concentrations and Behcet's disease. Four women and 14 men with complete Behcet's disease (age range 22–39 years, mean (SD) age 31.4 (2.9) years) and 12 healthy subjects were examined. There wasn't any age or sex difference in these groups. The serum IgE concentrations, total eosinophil counts in peripheral blood, and peripheral blood film were studied.

The classification and the diagnostic criteria of the disease were described in 1972 and have gained world wide acceptance.² According to this classification when four major signs (oral and genital ulcers, non-ulcerative skin lesions, and ocular disease) are present it is accepted as complete Behcet's disease. The diagnosis of Behcet's disease was made according to the diagnostic criteria established by the Research Committee on Behcet's disease.³ The patients studied had no evidence of a personal or family history of atopy. The stools of the patients and healthy subjects were examined microscopically three times over six months. Patients receiving corticosteroids who had parasites in their stool were excluded from the study. All the patients were given a complete physical, ophthamologic, and dermatologic examination in addition to the routine laboratory tests. Total number of eosinophils in the peripheral blood and peripheral blood film were counted. Serum IgE concentrations were measured with a radioimmunosorbent assay, using a slight modification of the Ceska and Link method.⁴ The table shows the total number of eosinophils in the peripheral blood; the peripheral blood film didn't show any significant difference between patients with Behcet's disease and controls (p > 0.05). Serum IgE concentrations in Behcet's disease were higher than those of the controls (p < 0.01). Duration of the disease varied from four to 18 years and there was a positive correlation between serum IgE concentrations and the duration of the disease (r = 0.85 ± 0.06; p < 0.05).

It has been reported that, thrombosis in the great veins and arteries can occur at any stage of Behcet's disease.⁵ IgE mediated antigenic response, probably by action on mast cells or basophils, can induce platelet activation and this activation results in platelet aggregates and perhaps arterial smooth muscle hyperplasia. Such evidence may suggest a reasonable biological pathway linking increased serum IgE concentrations and Behcet's disease.

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Results of patients and controls studied

<table>
<thead>
<tr>
<th>Mean (SD) values</th>
<th>Patient</th>
<th>Control</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IgE (U/ml)</td>
<td>132.36 (9.39)</td>
<td>42.94 (6.69)</td>
<td>p &lt; 0.01</td>
</tr>
<tr>
<td>Total eosinophil counts (mm³)</td>
<td>256.02 (2.7)</td>
<td>267.03 (0.3)</td>
<td>p &lt; 0.05</td>
</tr>
<tr>
<td>Eosinophils in peripheral blood film</td>
<td>8.77 (0.89)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of the disease (years)</td>
<td></td>
<td></td>
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</tbody>
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