

Journal summary

LEADER

Genetic inheritance and rheumatoid arthritis p 343
Rheumatoid arthritis, being one of the so-called 'auto-immune diseases' seems quite clearly to have some hereditary factors which predispose towards it. Just how important these genetic factors are is as yet not clear and many other factors may play a part, not the least being the possible role of infective agents acting as a trigger. Our leader this month explores these genetic mechanisms, though as yet it is not possible to come to any firm conclusions.

SCIENTIFIC PAPERS

Disturbances of heart conduction and HLA-B27 p 348
It has been shown for a long time that the development of ankylosing spondylitis is associated with an increased risk of getting cardiovascular disease. Now a Swedish study has shown an increased prevalence of HLA-B27 associated diseases and of HLA-B27 itself in an unselected group of men with heart block and a permanently implanted pacemaker. Further studies confirmed this trend for HLA-B27, but not associated diseases, compared with controls and suggested that other factors may be important in the pathogenesis of heart block in most men.

HLA-B51 and Behçet's syndrome p 351
In Israel at any rate if the family are readily identified with the HLA-B5 antigen they run a greater risk of familial occurrence of Behçet's syndrome. Similarly, the occurrence of the disease seems to be associated with HLA-B51 and HLA-B52, particularly HLA-B51, and the presence of recurrent oral ulceration may well be the first symptom.

T lymphocyte subsets in systemic sclerosis p 354
Although many B and T cell abnormalities have been identified in systemic sclerosis, together with changes in immune complexes, nevertheless proto-oncogene expression is increased in the T cells but not in the B cells. A study of T cell subpopulations showed an increase in CD29+ cells, suggesting an activation of memory cells in patients with the disease, which perhaps has an important part to play in its pathogenesis.

Iloprost comparisons with other treatment in secondary Raynaud's phenomenon p 359
Secondary Raynaud's phenomenon is not easy to treat so evaluation of a new drug is clearly useful. Intravenous iloprost proved helpful in over half of patients with this problem and seemed to be better than other drugs tried. Only the previous use of prostacyclin seemed to be helpful in judging whether iloprost may be effective and the latter is of course an analogue of the former. The study was based on retrospective group comparisons, so the results must inevitably be viewed with caution. Nevertheless, they are encouraging.

What laboratory test most usefully measures disease activity in psoriatic arthritis? p 362
To assess objectively what laboratory test is most useful in measuring disease activity in psoriatic arthropathy a whole battery of tests was used. Although many proved to have particular merits, the erythrocyte sedimentation rate was found to have the most value. Incidentally, symmetrical polyarthritis was shown to be the commonest manifestation of psoriatic arthritis.

Lipids and lipoproteins in rheumatoid arthritis p 366
Patients in hospital with rheumatoid arthritis have an increased mortality compared with the general population, and the commonest cause of death is cardiovascular disease. Although inflammation is associated with a reduction in serum cholesterol and some triglycerides, some apolipoproteins may be raised, and these may be associated with atherogenic effects. Lipoprotein (a) was found to be significantly raised in patients with classical seropositive rheumatoid arthritis, and this increase was significantly associated with inflammation. This may well explain, at least in part, the increased risk of cardiovascular disease.

IgA producing cells, sulphasalazine, and inflammatory arthritides p 369
What role does the gut have with mucosal immune defence mechanisms in inflammatory arthritides? The arguments still rage. Persistently raised serum concentrations of IgA certainly exist in this situation, and this has been interpreted as a sign of stimulation of the secretory immune system. The use of salazopyrine in ankylosing spondylitis and rheumatoid arthritis effects a reduction in this level but how it does this is not known. This study suggests it has a rapid effect on lymphocytes perhaps emanating from the gut. It certainly seems to reduce the number of IgA producing cells after about three weeks.

Effect of auranofin on granule protein secretion from neutrophils p 372
We do not really know how auranofin works in rheumatoid arthritis, but we do know that the neutrophil granulocytes are important in inflammation. Cytokines can activate them and probably have a pathogenetic role in rheumatoid arthritis. Can auranofin affect this process? At serum concentrations reached in patients it proved to be a potent inhibitor of cytokine release of granule proteins from neutrophils.

Serum selenium in rheumatoid arthritis 376
Selenium, a trace element, has anti-inflammatory and antiviral effects among others, and it is essential both as a nutrient and as part of the enzyme glutathione peroxidase. The latter protects cells from oxidative damage. Its serum concentration was significantly lower in patients with rheumatoid arthritis than in healthy controls. This gives rise to plenty of speculation, which should be tested.

Immune complexes containing IgE and inflammatory cells in rheumatoid arthritis p 379
This study explored the effect of immune complexes containing IgE in serum and synovial fluid on the activation of inflammatory cells in rheumatoid arthritis. It clearly showed that they were capable of activating neutrophils and to a lesser extent monocytes. A positive correlation was found between the activation of neutrophils and the total concentration of immune complexes, the presence of IgG, and the presence of IgE in the immune complexes.

Myeloperoxidase inhibition in rheumatoid serum and synovial fluid p 383
An inhibitor of myeloperoxidase has been found both in serum and synovial fluid from patients with rheumatoid arthritis. This inhibition seems to be of release of the enzyme rather than the degranulation response of the polymorphonuclear leucocytes. This inhibitor was found to be lower in the synovial fluid and seemed to be specific.

Synovial fluid hyaluronate and oxygen derived free radicals

p 389

In inflammatory joint diseases oxygen derived free radicals may possibly depolymerise hyaluronate, resulting in a decrease of viscosity of the synovial fluid. The effect of various such free radicals was studied with high performance liquid chromatography. The results suggested that superoxide and hydroxyl radicals may perhaps have a different mode of action: instead of depolymerisation they may change the molecular configuration of synovial fluid hyaluronate.

CASE REPORT

Vasculitis, vestibulocochlear dysfunction, and rheumatoid arthritis

p 393

A white woman with rheumatoid arthritis and vasculitis developed acute vestibuloauditory dysfunction in both ears resulting in total deafness. It was assumed that the vasculitis was affecting the vestibulocochlear nerve. Sadly, treatment was to no avail, though it helped the underlying rheumatoid arthritis. It seems this is the first time that this has been reported.

REVIEW

Interleukin-1 and how it acts differently in osteoarthritis and rheumatoid arthritis

395

Interleukin-1 seems to be important in the immunopathology of many forms of arthritis, and this has been increasingly recognised in the last few years. Its production is complicated and various inhibitors have been described. It is widely distributed, forming part of the network of cytokines, and seems to behave differently in osteoarthritis and rheumatoid arthritis. Perhaps these differences can be exploited.

HYPOTHESIS

Sex ratios and hormones in HLA related rheumatic diseases

p 401

What the mechanisms are that associate HLA antigens with disease remain unclear, but they occur more commonly in men. The antigen HLA-B27 is associated with high testosterone concentrations: do these high hormone concentrations lead in part to the diseases we see? This hypothesis article intriguingly explores this whole concept and perhaps leads us to recast our thoughts somewhat. A little lateral thinking never did anyone any harm.

EDITOR