Pediatric Rheumatology

Poster presentation

Early untreated juvenile idiopathic arthritis: predictors of outcome

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Background

Currently there is little research into initiation and progression of JIA and there are no reliable predictors of outcome in early disease, resulting in suboptimal treatment.

Methods

We are undertaking a five-year prospective study of children with newly diagnosed and untreated JIA. At least one knee was involved requiring intra-articular steroid injection. Detailed clinical, imaging, and laboratory parameters were measured at T0 and 3/12 for 2 years. At outset we obtained synovial biopsies. We report the outcome on those children for whom data is available for one year.

Results

At onset, of the first 32 children, 20 had oligoarticular (OJIA) disease. At one year, 2 had been reclassified as polyarticular (PJIA), 3 as extended oligo. Initially 9 had PJIA and, at 1 year, this increased to 11. At outset 2 had psoriatic, and 1 had enthesitis related arthritis.

At one year, all but 3 OJIA patients improved. Physician's global evaluation (PGE) and ANA status predicted recurrent synovitis at the biopsied joint, ($p < 0.01$) and ($p < 0.02$) respectively. PGE predicted the frequency of injections at any joint ($p < 0.01$).

At one year, all 11 with PJIA had improved clinical and laboratory parameters.

PJIA showed increased synovial pathology compared with OJIA (mean vessel score 6.9 vs. 2.6 ($p < 0.05$), mean B-cell score 1.7 vs. 1 ($p < 0.05$)).

Conclusion

In OJIA, PGE and ANA status predict recurrent synovitis. To date no correlation has been observed between histological findings and recurrent synovitis in OJIA. We will report on findings of our enlarged cohort who reach one year follow-up.