with SF leucocyte counts. Although levels of ICAM-1 appeared to be higher in SF than in serum the difference was not significant.

Conclusion High concentrations of soluble ICAM-1 and E-selectin in JIA patients with polyarthritis are reported here for the first time. Bloom¹ and de Benedetti² found increased ICAM-1 and E-selectin levels only in systemic JIA. In our patients only 3 had systemic onset disease, none showed signs of vasculitis or infection. Our finding of correlation of both molecule levels with joint count supports the hypothesis of synovial EC origin of these molecules. It brings interesting insight in suspected disease pathogenesis in terms of endothelial activation, leucocyte migration and angiogenesis. ICAM-1 and E-selectin could be a marker of aggressive disease, but their predictive value needs to be further studied.

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OP0092 EFFECTS OF CALCITONIN AND CALCIUM TREATMENT ON BONE MINERAL DENSITY IN PATIENTS WITH JUVENILE CHRONIC ARTHRITIS

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10.1136/annrheumdis-2001.495

Background Osteoporosis is one of the most important and common complications in children with Juvenile Chronic Arthritis (JCA). Osteoporosis in JCA has a multifactorial origin. Reduced or absent physical activity, decreased production of endogenous vitamin D, anaemia and drug treatment, especially steroid treatment are thought to be possible mechanisms of osteoporosis in children with JCA.

Objectives The aim of this study was to evaluate the effect of calcitonin and calcium treatment on bone mineral status in patients with JCA.

Methods According to EULAR criteria 16 patients (7 male, 9 female) with JCA (2 patients with systemic, 2 patients with oligoarticular and 12 patients with polyarticular type) and 13 age and sex similar healthy controls (8 male, 5 female) were included in the study. The mean age of the patients and control groups were $10,12 \pm 3,80$ and $10,2 \pm 3,26$ years respectively. Patients with JCA were randomly treated for 6 months with either 50 IU/day salmon calcitonin administered intranasal and 500 mg calcium per day per oral (Group 1) or 500 mg/day calcium only (Group 2) to determine their effect on bone status. Bone mineral density (BMD) of the lumbar spine at the L1-L4 level was measured by dual energy x-ray absorptiometry (Hologic QDR-4500 A). Disease activity was determined by clinical and laboratory evaluation (serum erythrocyte sedimentation rate and C reactive protein levels), and Juvenile Arthritis Functional Assessment Report (JAFAR). Data from BMD measurements were obtained at baseline and 6 months later.

Results The mean age and the duration of disease for groups 1&2 were $9,4 \pm 4,31$ years and $41,10 \pm 42,29$ months and $11,33 \pm 2,65$ years and $40,66 \pm 33,31$ months respectively. The mean baseline BMD results were 0.458 ± 0.157 gr/cm² in Group 1, 0.580 ± 0.137 gr/cm² in Group 2 and 0.599 ± 0.096

gr/cm² in control group. BMD values of the JCA group were significantly lower than the control group ($p = 0,038$). In both treatment groups (Group 1 and Group 2) there were an increase in BMD values ($p_1 = 0,05$ and $p_2 = 0,028$ respectively). As the increments were compared the difference in between was not statistically significant ($p > 0.05$).

Conclusion Our results suggest that children with JCA would benefit from calcium supplementation and calcitonin treatment. No adverse effects were observed in both treatment groups during the follow-up period.

OP0094 STEADY-STATE PLASMA CONCENTRATIONS OF ROFECOXIB IN CHILDREN WITH JUVENILE RHEUMATOID ARTHRITIS

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10.1136/annrheumdis-2001.496

Background

Objectives To compare the steady-state AUC(0–24 h) of rofecoxib, dosed @ approx 0.32 mg/kg/day in children aged 2 to 17 years vs. adult historical controls who received one 25-mg tablet daily (mean weight of 77.7 kg, corresponding to ~0.32 mg/kg/day).

Methods Two trials were performed. In one, adolescent JRA patients (12 to 17 years) received 12.5 mg or 25 mg tablets to approximate 0.32 mg/kg/day. In another, JRA patients aged 2–11 years received rofecoxib 2.5 mg/ml suspension to approx. 0.32 mg/kg/day. Both formulations have equivalent bioavailability. All patients received once-daily rofecoxib for at least 8 days (to presumptive steady state) then trough and post-dose blood samples were obtained for up to 24 h. To minimise the number of blood samples for 2–5 year-olds, 2 sampling schedules with different time points were used. Comparison to adult historical controls was made by calculating AUC(0–24 hr) geometric mean ratio (GMR) with corresponding 90% confidence intervals (CI) for specific paediatric age groups: 12–17 yrs; 6–11 yrs; and 2–5 yrs; relative to adult controls. Similar comparisons were made for C_{max}. Summary statistics for AUC(0–24 hr) were calculated for each treatment (12.5 mg or 25 mg Rofecoxib) in patients 12–17 years.

Results See Table 1. 12–17 yr-old patients taking 12.5 mg or 25 mg rofecoxib showed similar exposure to adult controls receiving the same dose. Rofecoxib was generally well-tolerated in all patients and age ranges studied.

Abstract OP0094 Table 1

	Paediatric	Groups	Versus Adult	Historical	Controls
	AUC (0–24 hr)	ng-hr/mL		C _{max}	ng/mL
	Geometric Mean	GMR (90% CI)		Geometric Mean	GMR (90% CI)
2–5 year-olds	2581	0.57 (0.48, 0.73)		204	0.58 (0.45, 0.74)
6–11 year-olds	2885	0.64 (0.54, 0.74)		208	0.57 (0.48, 0.67)