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Table 1 Clinical and radiological features/data of six patients with rheumatoid arthritis (RA) and spontaneous small joint ankyloses in the hands

Patient	Sex	Age* (years)	Disease duration (years)	Small joint ankylosis	RF	Nodules	HLA-B27	*x*-Ray examination§	Normal SI joints?	Psoriasis or in family	RA criteria items fulfilled	Ankylosing spondylitis¶
1	F	68*	26	PIP II, III left hand	+	Yes	Not done	Yes	Yes	No	7/7	No
2	F	78	26	PIP II both hands	+	No	No†	Yes	Yes		6/7	No
3	M	79*	19	PIP IV, V left hand	+	Yes	No	Yes	Yes	No	7/7	No
4	F	79	32	PIP II, III right hand	+	No	Not done	Yes	Yes	No	6/7	No
5	F	82	40	PIP II both hands and III left hand	–	No	No	Yes	Yes	Yes	5/7	No
6	F	83	49	PIP III, V right hand, os carpale right wrist	+	No	Yes‡	Yes	Yes	No	6/7	No

*Age at death; †HLA type classes I A02 A33 B14 B40, class II DR 04 DR 15; ‡HLA type classes I A02 A03 B15 B27, class II DR 04 DR 15; §symmetrical, severe, erosive changes in large and small joints; ¶the 1966 New York criteria fulfilled.
PIP, proximal interphalangeal; RF, rheumatoid factor; SI, sacroiliac.

In the second cohort of patients with early disease no patient showed any signs of clinical or radiographic ankylosis of the small joints in the hand.

To conclude, the present data suggest that the prevalence of small joint ankylosis in RA is low and confined to patients with longstanding severe disease. This may be an indication of the possibility that ankylosis in RA is a vanishing phenomenon, possibly owing to more efficient treatment options. However, this pilot study shows that it is still feasible to identify in clinical practice small joint ankylosis in patients with RA. The possibility that this manifestation of RA may be a clue to important pathogenetic mechanisms in RA and the spondyloarthropathies argues in favour of identifying these patients and including them in pathogenetic studies of these diseases.

I Leden,[1] J Theander,[1] B Svensson[2]

[1] Section of Rheumatology, Department of Internal Medicine, Central Hospital, Kristianstad, Sweden; [2] Section of Rheumatology, Department of Medicine, Helsingborg's Lasarett, Helsingborg, Sweden

Correspondence to: Dr I Leden, Bokvägen 27, 291 43 Kristianstad, Sweden; ido.leden@telia.com

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Intra-articular infliximab in patients with rheumatoid arthritis and psoriatic arthritis with monoarthritis resistant to local glucocorticoids. Clinical efficacy extended to patients on systemic anti-tumour necrosis factor α

Some experiences with intra-articular (IA) infliximab treatment in patients with refractory monoarthritis have been reported, even though these studies have important limitations including small sample size and short trial duration.[1–4]

Aim of this study was to evaluate the efficacy and safety of IA infliximab administration in a larger cohort of patients. We studied 10 patients with rheumatoid arthritis (RA) and seven with psoriatic arthritis (PsA) with active monoarthritis lasting at least 3 months, refractory to disease-modifying antirheumatic drugs (DMARDs) and to IA glucocorticoids.[5 6] DMARDs dose had to be stable for at least 6 weeks before IA injection of infliximab, and it was maintained stable throughout the follow-up. IA methylprednisolone had to have been injected at least 6 weeks before the procedure. Concomitant treatment with anti-TNFα other than infliximab was permitted; indeed the biologic agent was stopped 2 weeks before and restarted 2 weeks after IA procedure. After removing synovial fluid, IA infliximab was injected at dosage of 100 mg for the knee, 50 mg for the ankle, 25 mg for the wrist.

Patients were evaluated at baseline, and after 2 and 12 weeks for visual analogue scale (VAS) for pain, and the degree of swelling and tenderness (0–3).[2 3] The sum of swelling and tenderness scores provided the total arthritis score (0–6). Erythrocyte sedimentation rate (ESR, mm/h) and C-reactive protein (CRP, mg/dl) were also evaluated. Ultrasonographic examination of the inflamed joint was performed by the same rheumatologist, an arbitrary scoring system (0–6) for assessment of inflamed joint was applied considering synovial hypertrophy (0–3) and power Doppler evaluation (0–3).[7–9]

Table 1 and fig 1 show the clinical features and the outcome parameters of the enrolled patients.

Two and 12 weeks after treatment a clinical response was seen in nine of 10 (90%) RA patients. Regarding patients with PsA, after 2 weeks a clinical response was seen in six of seven (85.7%) patients, and after 12 weeks in four of seven (57.1%) patients. No local or systemic adverse reactions were

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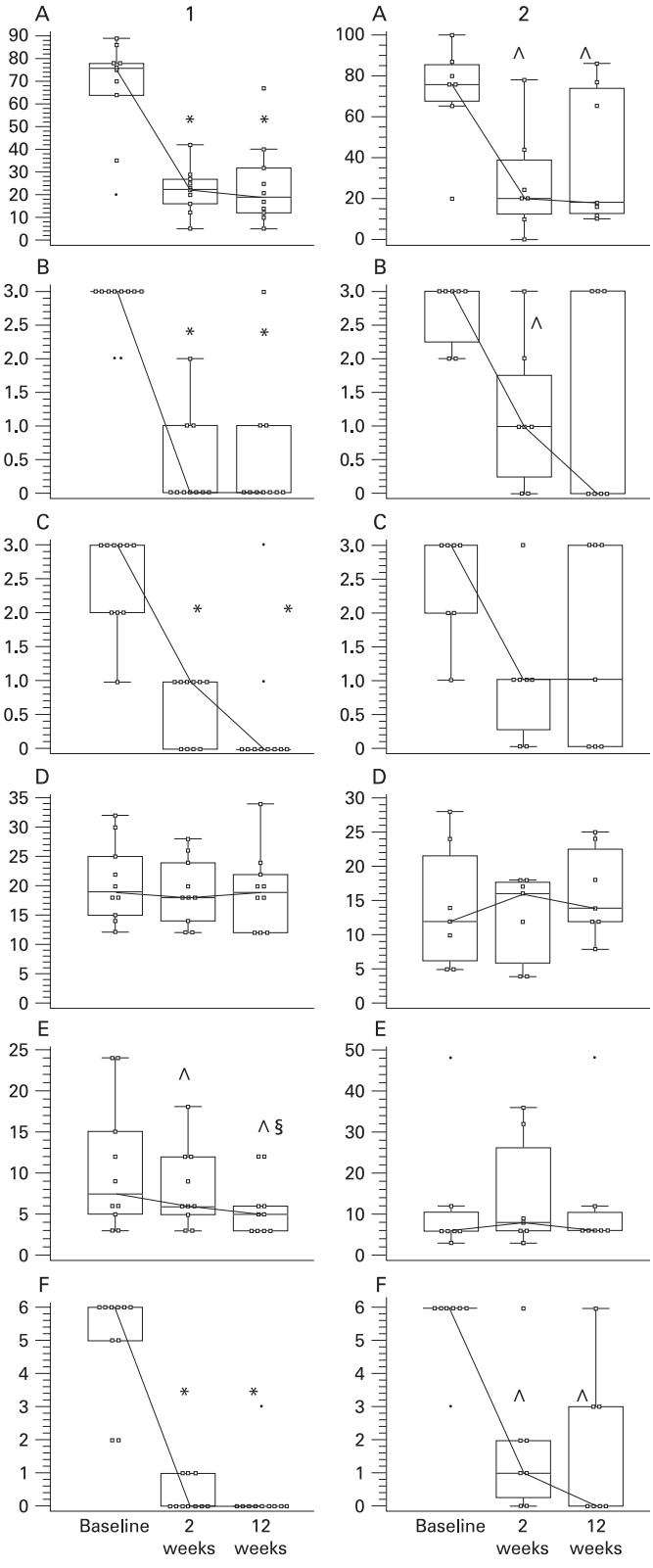

Figure 1 Clinical parameters in patients affected by rheumatoid arthritis (n = 10, column 1) and psoriatic arthritis (n = 7, column 2) with refractory monoarthritis treated with intra-articular administration of infliximab. Box and whiskers plot (median, quartiles, range and possible extreme values) of: (A) visual analogue scale for pain; (B) degree of swelling; (C) degree of tenderness; (D) erythrocyte sedimentation rate; (E) C-reactive protein; (F) ultrasonographic score. Values shown are the mean values at baseline (before intra-articular infliximab treatment), 2 and after 12 weeks after treatment. The Wilcoxon paired test was used to compare quantitative variables in the same group. *$p<0.01$ vs baseline, ^$p<0.05$ vs baseline, §$p<0.05$ vs 2 weeks.

documented. In patients with RA and PsA the US score correlated positively with the total arthritis score at 12 weeks ($p<0.05$).

The results of this study suggest that patients with RA and PsA with refractory monoarthritis could be successfully treated with IA infliximab. The ultrasonographic features of synovitis significantly improved during the follow-up and correlated positively with the outcome measures, confirming the biologic effect of IA infliximab. In patients with a secondary failure of treatment, a second IA injection of infliximab determined a complete response in all the cases.

IA infliximab resulted efficacious in five of six patients who were receiving systemic TNFα antagonists other than infliximab. Changing anti-TNFα and inoculating it directly in the site

Table 1 Clinical features of the patients

Patient	Diagnosis	Sex	Age (years)	Disease duration (years)	Concomitant therapy	Joint	Clinical outcome 2 weeks	Clinical outcome 12 weeks	Follow-up duration (weeks)	Clinical events during the further follow-up
1	RA	M	36	4	MTX, PDN	Knee	PR	PR	104	Polyarticular flare-up including the treated joint at week 104
2	RA	F	51	21	ADA, MTX, PDN	Knee	PR	PR	111	No flare-up
3	RA	M	34	3	ADA, MTX, PDN	Knee	CR	LoE	81	Second IA INF at week 12: CR.
4	RA	M	56	2	MTX, SSZ, PDN	Knee	LaE	PR	81	Polyarticular flare-up sparing the treated joint at week 52, MTX dosage increased
5	RA	F	25	12	ETA, MTX, PDN	Knee	PR	CR	38	No flare-up
6	RA	F	61	17	MTX, SSZ, PDN	Knee	CR	CR	38	No flare-up
7	RA	F	49	9	ETA, MTX, PDN	Knee	PR	PR	52	No flare-up
8	RA	F	41	12	MTX, PDN	Ankle	CR	CR	168	No flare-up
9	RA	F	35	4	MTX, PDN	Ankle	CR	CR	120	No flare-up
10	RA	F	48	7	ADA, MTX, PDN	Wrist	PR	PR	12	–
11	PsA	M	52	21	MTX	Knee	CR	LoE	77	Second IA INF at week 12: CR. Flare-up of treated joint after 26 weeks, systemic INF started: PR
12	PsA	F	31	6	MTX, PDN	Knee	PR	PR	77	No flare-up
13	PsA	F	54	2	MTX, SSZ, PDN	Knee	PR	CR	68	Polyarticular flare-up sparing the treated joint at week 60, MTX dosage increased
14	PsA	M	36	9	MTX	Knee	PR	LoE	73	Second IA INF at week 12: CR. Flare-up of treated joint after 32 weeks, synoviectomy
15	PsA	F	38	12	MTX, PDN	Knee	CR	CR	52	Flare-up of treated joint at week 38, second IA INF: CR
16	PsA	F	43	21	ETA, MTX, PDN	Knee	LaE	LaE	40	Persistence of monoarthritis despite increasing in PDN dosage
17	PsA	F	38	5	MTX	Knee	PR	CR	103	Flare-up of treated joint at week 36, second IA INF: CR

ADA, adalimumab; CR, complete response; ETA, etanercept; IA, intra-articular; INF, infliximab; LaE, lack of efficacy; LoE, loss of efficacy; MTX, methotrexate; PDN, prednisone; PR, partial response; PsA, psoriatic arthritis.
RA, rheumatoid arthritis; SSZ, salazopyrine.
CR was defined as ⩾70% improvement in both total arthritis score and VAS for pain, PR as ⩾50% improvement at least in one among total arthritis score or VAS for pain.

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of inflammation determined a good clinical response. Use of IA infliximab in this cohort of patients with RA and PsA with resistant monoarthritis provides evidence that it could be an efficacious and safe therapeutic option determining a sustained clinical improvement also in patients on other anti-TNFα. Considering the sample size of this study, larger prospective trials are needed in order to confirm these preliminary findings.

F Conti,[1] F Ceccarelli,[1] R Priori,[1] A Iagnocco,[1] A Signore,[2] G Valesini[3]

[1] Dipartimento di Clinica e Terapia Medica, Sezione di Reumatologia, Sapienza Università di Roma, Policlinico Umberto I, Rome, Italy; [2] Unità di Medicina Nucleare, II Facoltà di Medicina, Sapienza Università di Roma, Ospedale S. Andrea, Rome, Italy; [3] Dipartimento di Clinica e Terapia Medica, Sezione di Reumatologia, Sapienza Università di Roma, Policlinico Umberto I, Viale del Policlinico 155, 00161 Rome, Italy

Correspondence to: Professor Guido Valesini, Dipartimento di Clinica e Terapia Medica, Sezione di Reumatologia, Sapienza Università di Roma, Policlinico Umberto I, Viale del Policlinico 155, 00161 Rome, Italy; guido.valesini@uniroma1.it

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Increased blood glucose levels following intra-articular injection of methylprednisolone acetate in patients with controlled diabetes and symptomatic osteoarthritis of the knee

The effect of oral or intravenous steroid treatment on glucose metabolism is well known.[1] Intra-articular steroid injection (IASI) at the knee joint is a common procedure,[2] however there are no studies on the effect of IASI on glucose metabolism. Patients with controlled diabetes (HgA1C<7), using modern versions of blood glucose monitoring devices, with knee pain due to osteoarthritis of the knee (OAK) for more than 3 months without sufficient response to non-steroidal anti-inflammatory drugs (NSAIDs) and physical therapy were offered an IASI of 50 mg of methylprednisolone acetate (MPA) (Pharmacia & Upjohn, Puurs, Belgium) at the knee joint. If they agreed, patients were asked to monitor their blood glucose levels before and 2 h after breakfast, lunch and supper every other day for 1 week prior to injection and daily for 4 days, then every other day for 10 days following the injection using the same glucose monitoring devices. All the IASIs were performed in the morning following breakfast, after maximal aspiration of knee fluid (if any). Patients were asked to continue the same regimen of physical activity, diet and antidiabetic treatment. For statistical analysis, a significant increase in blood glucose level after the injection were considered if the levels were higher by at least 2 SD in relation to the mean comparable glucose level (in reference to meals) before the injection. The study was approved by the Helsinki committee of the Nazareth Hospital, and all the patients signed a consent form.

Nine patients with type 2 diabetes were injected and all completed the study. Seven patients were female and four patients were treated with diet only. Significant increase in blood glucose levels following the IASI were documented in all the patients however prominent increase was seen in seven patients, and in two patients the increase was minimal with a flat curve. A significant increase was seen as early as 2–4 h after the injection in four patients and 12–26 h in the rest of the patients (table 1). Peak levels were seen after nearly 5 h in three

Table 1 Time relation of glucose levels following intra-articular steroid injection (IASI)

Patient no.	Time to earliest significantly increased glucose level, h	Earliest significantly increased glucose level, mg %	Time to peak glucose levels, h	Peak glucose levels, mg %	Time to return to baseline levels, h
1	4	339	5	375	68
2	4	160	5	310	52
3	2	184	17	283	42
4	12	227	32	463	48
5	2	134	5	314	70
6	26	249	84	282	96
7	12	255	48	500	104
8	20	154	24	191	48
9	14	150	48	165	58

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