mailed to rheumatologists (adult practice) (n = 995) who were identified through the ACR membership directory. Only physicians currently in practice were included.

Results 375 (37.7%) questionnaires were returned between March 12, 2000 and April 25, 2000. 280 qualified for analysis. The results (A: No baseline steroid use, B: 5 mg/d prednisone) below illustrates the frequency with which rheumatologists cited each drug or drug combination as their first choice of treatment for each scenario. The most common change in medication for both cases was addition/adjustment of prednisone (A: n = 248; B: n = 229, C2 = 4.58, p = 0.03). Of those given oral steroids for a limited amount of time, mean increase in daily dose of prednisone was A: 16.4 ± 12.5 mg, B: 18.3 ± 12.5 mg. Duration of increased dose was highly variable ranging from 1 day (bolus) to 3 months. Some rheumatologists chose to continue increased prednisone indefinitely, (A: n = 19; B: n = 14). There appeared to be no consistent relationship between steroid dose and duration. For both cases there was no difference in the number of rheumatologists who increased MTX dose (A: n = 84; B: n = 85). The number of rheumatologists who added another DMARD to the patient's regimen were more in group A and differed significantly ($\chi^2 = 3.97$, p = 0.046) from group B. Similarly, rates of initiation of anti-TNF therapy was higher in group A ($\chi^2 = 4.68$, p = 0.03). However, rates of addition of leflunomide showed no statistically significant difference.

Conclusion Though the cases presented were accepted by rheumatologists as RA flare requiring intervention; no consistency of practice other than an increase in steroids could be identified. Further studies determining optimal therapy for increases in RA activity are necessary.

FRI0008 DIFFICULT TO TREAT RHEMATOIDS RESPOND TO LEFLUNOMIDE

FM Erkeller-Yuksel, JA Griffin. *Rheumatology, Barnet and Chase Farm Hospitals NHS Trust, London, UK*

10.1136/annrheumdis-2001.1137

Background Leflunomide (LEF) is a new disease modifying agent for rheumatoid arthritis (RA). It was successful in treating relatively recent onset rheumatoid patients with a good safety record.¹

Objectives Our aim was to assess the safety and efficacy of LEF in difficult to treat and chronic rheumatoid patients in a district general hospital.

Methods Patients with difficult to treat RA (n = 39) were commenced on LEF. Patients were followed every 4 for 6 months for side effect profiles and efficacy recordings. We documented all side effects of LEF, routine blood test results and blood pressure measurements. Pre-treatment and 6th month erythrocyte sedimentation rate (ESR) and haemoglobin (Hb) levels, patients' and doctors' global disease activity Visual Analogue Scores (VAS) were Statistically compared.

Results Mean age of patients was 48+14 and duration of disease was 13+10 years. Combination of methotrexate with LEF was the choice of treatment for 12 patients. Until now 25 patients completed 6 months evaluation and 9 out of 39 patients discontinued LEF due to side effects or infections. 6 further patients discontinued LEF after 6 months. Alopecia, diarrhoea and rash were the most common side effects (28%, 26% and 23% respectively). The most serious adverse effect was sensory neuropathy of the lower limbs in a young male patient. This occurred within

10 months of LEF treatment and showed some improvement 2 months after discontinuation. Another elderly male was admitted to hospital twice with severe abdominal pains and diverticulitis.

Patients felt better on LEF treatment and showed significant improvement in reduction of ESR (p < 0.02), increase of Hb (p < 0.02) and a reduction of VAS of patients' (0.0001) and doctors' (p < 0.0001) global disease activity over a 6 month period (Wilcoxon Rank Sum Test). Due to clinical improvement we were able to stop or reduce dosage of other concomitant treatment.

Conclusion In conclusion LEF was reasonably well tolerated by difficult to treat rheumatoids even though side effects were more frequent than published studies (1). The clinical response was good considering the long disease duration and history of poor response to treatment in our group.

REFERENCE

- 1 Emery P, Breedvekd FC, Lemmek EM, Kaltwasser JP, Dawes PT, et al. A comparison of the efficacy and safety of leflunomide and methotrexate for the treatment of rheumatoid arthritis. *Rheumatology* 2000;**39**:655-65

FRI0009 INFILIXIMAB IN THE TREATMENT OF RHEUMATOID ARTHRITIS (RA): REFERRAL PATTERNS, RESPONSE TO TREATMENT, AND ADVERSE EVENTS IN A REAL WORLD SETTING

Y Yazici, D Erkan, I Kulman, L Leff, J Markenson, MJ Harrison. *Rheumatology, Hospital for Special Surgery, New York, USA*

10.1136/annrheumdis-2001.1138

Background Infliximab is a chimeric, monoclonal antibody against tumour necrosis factor (TNF) alpha, recently developed to complement methotrexate therapy in RA patients with a less than optimal response to treatment. To date it has only been studied in clinical trials.

Objectives To describe referral patterns, patient response to treatment, and adverse events in a cohort of RA patients treated with infliximab in a real world setting.

Methods Patients who had received their first dose of infliximab between 1/00 and 6/00 were included to ensure the possibility of at least 6 months of drug exposure. We evaluated patients at baseline, and followed them prospectively every 2 months for a total of 6 months. Patients completed several questionnaires regarding RA history, treatment, and disease activity (HAQ, pain, fatigue, tender and swollen joint counts) at each infusion. All subjects were contacted between infusions for reporting of side effects.

Results 36 patients were treated with infliximab between January 1 - June 30, 2000 (female n = 33, mean age = 63 ± 12.9 y, disease duration = 15.3 ± 10.2 y). They had previously failed an average of 3 DMARDs. 24 patients were on oral steroids at baseline. 16 patients received infliximab without concurrent MTX. 12 of 36 patients discontinued treatment before 6 months. Discontinuation reasons were inadequate response (n = 5), repeated episodes of dyspnea (n = 3), asthma (n = 1), chest tightness (n = 1), phlebitis (n = 1), and patient noncompliance (n = 1). Table 1 shows individual measures of disease activity in 24 patients who completed 6 months of infliximab. We detected a significant improvement in HAQ scores, and trends toward improvement in pain scores and tender joint counts. HAQ scores improved in 19/24, stiffness in 14/24, pain in 13/24, fatigue in 13/24, tender joint counts in 13/24 and swollen joints in 15/24 of patients. Since initiating infliximab therapy, of the 36 patients receiving 198 infusions, 18 patients reported a total of 33

adverse events (headaches $n = 8$, nausea $n = 2$, abdominal pain $n = 2$, chest pain $n = 1$, chills $n = 2$, dyspnea $n = 3$, myalgias $n = 3$, pruritis $n = 4$, fatigue $n = 3$, and rash $n = 5$).

Abstract FRI0009 Table 1

	HAQ	Stiffness (minutes)	Pain (VAS- cm)	Swollen joint count	Tender joint count
Baseline	1.95 ± 0.6	92 ± 88	6.4 ± 2.5	13.21 ± 11	13.7 ± 11.8
6 months	1.22 ± 0.7	56 ± 75	4.9 ± 3.0	11.5 ± 10.9	10.5 ± 10.2
p value	0.0002	0.13	0.07	0.29	0.07

Conclusion Infliximab is often used in more difficult RA patients (older, long-standing RA, multiple DMARD failures). This referral pattern may explain the increased incidence of adverse events and suboptimal clinical response noted in our cohort. However, our results suggest a trend towards rapid, clinically important improvement in measures of disease activity. Ongoing follow-up of this growing group of patients will provide necessary information regarding the appropriate role of infliximab in the treatment of RA.

FRI0010 EFFECT OF OSTEOPROTEGERIN AND PAMIDRONATE TREATMENT IN TRANSGENIC MICE OVEREXPRESSING HUMAN TNF-ALPHA

¹K Redlich, ²A Maier, ¹S Hayer, ³G Kollias, ⁴CR Dunstan, ⁵S Lang, ⁶W Woloszczuk, ¹G Steiner, ¹J Smolen, ¹G Schett. ¹Internal Medicine III, Division of Rheumatology; ²Department of Radiology; ³Department of Molecular Genetics, Hellenic Pasteur Institute, Athens, Greece; ⁴Department of Pathology, Amgen, Inc., California, USA; ⁵Department of Pathology; ⁶Ludwig Boltzmann-Institute of Exp. Endocrinology, University of Vienna, Vienna, Austria

10.1136/annrheumdis-2001.1139

Background Rheumatoid arthritis (RA) is characterised by progressive joint destruction resulting from chronic inflammation. Recent studies suggest that bone-resorbing osteoclasts formed in the synovium play an important role in bone destruction in RA.

Objectives We studied the effect of anti-resorptive treatment with osteoprotegerin and/or pamidronate compared to TNF blockade with infliximab on the development of erosions in TNF overexpressing mice.

Methods Systemic treatment with osteoprotegerin (OPG), pamidronate, both osteoprotegerin and pamidronate, infliximab or phosphate buffered saline (PBS) was carried out by intravenous injection. Treatment was initiated at the time of onset of arthritis and continued over 35d. Clinical, serological, radiological and histological outcomes were assessed after treatment.

Results Clinical improvement, as assessed by reduction in paw swelling was only seen in the infliximab treated group. X-Rays of the hind paws were performed to quantify erosive changes. Erosions were detectable in each joint compartment. Grading of erosions was performed analogous to the Larsen score. There was a marked and significant ($p < 0.05$) reduction in the Larsen scores of mice treated with OPG (-54%), OPG and pamidronate (-64%) and infliximab (-66%). Microscopic examination of decalcified joint tissue sections using a semiquantitative method, revealed a significant ($p < 0.05$) reduction in the extent of erosions in all treatment groups (OPG: -56%; pamidronate: -53%;

OPG + pamidronate: -81%; infliximab ?46%) when compared to controls.

Conclusion These data suggest that anti-resorptive treatment may have a significant potential in TNF-mediated bone destruction.

FRI0011 THE EFFECT OF STEROID INJECTION AFTER ARTHROSCOPIC SYNOVECTOMY IN RHEUMATOID KNEE SYNOVITIS

SI Kuzmanova, PC Solakov, AN Atanasov, SA Andreev, K Klinkanov. *Rheumatology, Medical Faculty Hospital, Plovdiv, Bulgaria*

10.1136/annrheumdis-2001.1140

Background The study assesses the therapeutic result from a single application of local corticosteroid (betamethasone 7 mg) seven days after the performance of an arthroscopic synovectomy of the knee joint in patients with rheumatoid arthritis (RA).

Objectives An arthroscopic shaver-synovectomy with a consecutive tidal lavage with 4 – 5L saline was performed in 73 RA patients (51F/22M) with mean disease duration 4,5 (± 1.8) years and active synovitis of the knee joints. In 23 patient (15F/8M) after the arthroscopic synovectomy (AS) an application of a local corticosteroid was not performed (control group).

Methods The assessment of the results was done on 1st, 3rd and on 6th month after AS according to the Knee Society Rating System, using a scale for assessment of the knee joint in respect of the changes of the pain, range of motion (ROM), joint stability and some functional parameters.

Results A higher degree of reducing of the pain, improvement in the joint stability of the gait and of the ability of climbing and descending scales in all patients with local application of corticosteroid after AS was found compared to controls ($p < 0.001$)

Conclusion The results confirm the better effect from the administration of a local corticosteroid one week after an arthroscopic synovectomy in rheumatoid knee synovitis.

REFERENCES

- Sharma A, Baethge BA, Acebes JC, et al. Arthroscopic lavage treatment in rheumatoid arthritis of the knee. *J Rheumatol.* 1996;**23**(11):1872–4
- Srinivasan A, Amos M, Webley M. The effect of joint washout of steroid injection compared with either joint washout of steroid injection alone in rheumatoid knee effusion. *Br J Rheumatol.* 1995;**1**:219–27

FRI0012 ADVERSE EVENTS, DRUG WITHDRAWAL AND EFFICACY OF LEFLUNOMIDE IN UNSELECTED OUTPATIENTS WITH RHEUMATOID ARTHRITIS

¹L Mourad, ¹EN van Roon, ²TL Jansen, ²PM Houtman, ²GA Bruyn, ²EN Griep, ¹WA Baars, ³JR Brouwers. ¹Department Clinical Pharmacy; ²Department Rheumatology, Medisch Centrum Leeuwarden, Leeuwarden; ³Department of Social Pharmacy and Pharmacoepidemiology, State University of Groningen, Groningen, The Netherlands

10.1136/annrheumdis-2001.1141

Background

Objectives Leflunomide (LEF) is a disease modifying antirheumatic prodrug with immunomodulating, antiproliferative and antiinflammatory properties. We studied our first daily practice experience with LEF in the Outpatient Department of Rheumatology.

Methods In this prospective study we included all consecutive patients with active rheumatoid arthritis (RA), starting treatment