a single dose of 300 MBq ^{99}Tc -labelled anti-TNF α MAb and whole body images and spot views were obtained with a double-headed gamma camera.

Results Prominent uptake of the radiolabeled anti-TNF α MAb was clearly visible in inflamed joints of all patients examined. The distribution of the label was compatible with binding to both soluble and membrane-bound TNF α . To elucidate the latter, displacement studies are now in process.

Conclusion Our results show that scintigraphic detection of inflammation with anti-TNF α MAb is feasible. The potential use of this technique to monitor disease activity and response to therapy deserves further investigation.

AB0200 DO ULTRASOUND-GUIDED CORTICOSTEROID INJECTIONS PROVIDE SHORT-TERM RELIEF OF SYMPTOMS IN PATIENTS WAITING TOTAL HIP REPLACEMENT?

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Background Osteoarthritis is the commonest cause of total hip joint replacement. The indication for this procedure is pain and loss of function that has not responded adequately to conservative therapy. Maintaining good muscle strength and optimising weight are important to good outcome post-surgery. This is difficult when symptoms reduce patients' mobility. Corticosteroid injections are commonly used for short-term relief of joint symptoms.

Objectives The primary aim of this pilot study is to determine whether corticosteroid injections improve pain and function in this group, and to identify any baseline features that predict response.

Methods Patients with osteoarthritis or stable rheumatoid arthritis awaiting total hip replacement are invited to take part. Patients with a contraindication to intraarticular corticosteroid or impending replacement (within 3 months) are excluded. Baseline data collected includes the WOMAC index, VAS for pain and stiffness during rest and walking, and SF-36. These outcome measures are repeated at 2, 6 and 12 weeks. Patients have 40 mg triamcinolone with 2 mls of 1% lignocaine via ultrasound-guided injection into the hip. Degree of capsular distension, a possible marker of synovitis, is documented by US. Conventional radiographs of the affected hip are also obtained to assess degree of damage.

Results 6 patients have been recruited to date in this ongoing study. Pain scores and functional changes have improved. Our experience suggests those with capsular distension are more likely to respond.

Conclusion Any reduction in patient symptoms that improves pre-operative pain and mobility should improve patient well-being and could also improve outcome post-surgery. Any predictor of response would allow the application of more accurate risk-benefit assessment for this procedure.

AB0201 CAPILLAROSCOPIC EXAMINATION IN ARTHRITIS PSORIATICA

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Background The capillaroscopic examination gives a possibility to find a correlation between the groups of illnesses and the change of microcirculation based on a non-invasive method. In the publications are mentioned very seldom that decrease of the capillary loops' length and diameter, the twisting of venous side and the decrease of capillaries' density are the fundamental variables in the case of capillaroscopic examination of Arthritis Psoriatica's (AP) patients.

Objectives The study was made on 34 verified AP's patients (20 male, 14 female) selected by the basis of the ARA's criterias in the authors Department of AP Outpatient. Dysqualifying criteria were the metabolic diseases, the cardiovascular diseases and smoking.

Methods The period of psoriasis and arthritis was studied, and the capillary was classified on the basis of morphological criterias (hairpin-shaped, spiral, and bushy appearance) their lengthened and extended forms (arterial and venous side, the length of apical region), the density of capillaries, tearness and continuousness of flow. Leitz's microscope was used for examination (35x magnification, max. 100x). The nailfold was lightened with cold light, further the paraffin oil was used to the surface.

Results It was found that the period of dermatological symptoms are proportional to the number of spiral form of capillaries ($r = 0.371$, $p < 0.05$). The length and width of capillaries were independent from the dermatological and arthritic symptoms ($NS = p > 0.05$). In the case of lengthened frame, the number of bushy forms were less than the others. Then the number of the capillaries loops were decreased ($p < 0.05$).

Conclusion It is accepted in general, that the decrease of the capillaries's numbers as well as the morphological changes -as a typical form of the AP's patients -are in correlation significantly with the period of psoriasis. Disagrees with others previous publications, the authors did not find significant difference in the size of capillary loops comparing to the normal control.

AB0202 THE INCREASING USE OF ULTRASONOGRAPHY TO GUIDE CORTICOSTEROID INJECTIONS

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Background Local corticosteroid injection is a standard treatment for joint and soft tissue inflammation. However, these injections are often inaccurately placed and this can affect clinical outcome. Ultrasonography (US) has the ability to precisely identify local pathology, thereby improving diagnosis and is also able to accurately guide placement of corticosteroid injections. In our unit, a dedicated rheumatology US machine is available in the out-patient department operated by experienced rheumatology research fellows trained in musculoskeletal US.

Objectives To evaluate the number, site and indication for US-guided soft tissue and intra-articular corticosteroid injection compared with the standard 'blind' clinical approach.

Methods Consecutive patients receiving soft tissue and intra-articular corticosteroid injection in the rheumatology out-patient

clinics at Leeds General Infirmary over a two-week period were included in this observational study. Information recorded on a standard case report form included patient details, injection site, indication for injection and whether patients received a standard or an US-guided injection.

Results Overall, 91 patients received 127 soft tissue and intra-articular corticosteroid injections. 17 patients (19%) were referred for an US-guided procedure and these patients received 26 injections (20% of total injections). The sites injected using US were small joints of the hands and feet (8), tendon sheaths (8), shoulder (4), hip (3), wrist (2) and sternoclavicular joint (1). Seven patients referred for US-guided corticosteroid injection (41%) reported a poor response to a previous standard injection. US was used to confirm the local diagnosis in 6 patients (35%) before a guided injection was performed.

Conclusion The use of US to guide corticosteroid injections is increasing, especially in patients who have failed to respond to a standard injection. US is particularly useful when clinical diagnosis is uncertain or injection is technically difficult. As US becomes increasingly used in rheumatological practise, more rheumatologists may wish to learn the technique of US-guided injection which will require training. Further work is required to determine whether US-guided corticosteroid injection is of additional benefit to patients.

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OP0124 THE PAINFUL SHOULDER. SONOGRAPHIC STUDY IN 425 PATIENTS

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Background Shoulder pain is a common symptom and it may be related to many different diseases. Both articular structures and periarticular soft tissues may be involved and for the complex anatomy of the shoulder girdle it is often difficult to identify the site of anatomic alterations with clinical examination. In contrast, sonography of soft tissues successfully evaluates changes of both articular and periarticular structures.

Objectives The aim of the present study was to identify sonographically the site and the entity of alterations in patients with shoulder pain.

Methods Sonography of the shoulder was performed in 425 patients with shoulder pain. They were 282 female and 143 male; their mean age was 57.9 years (range 18-90). 228 patients had a clinically suspected diagnosis of periarticular disorders of soft tissues of the shoulder, 23 of polyarthritis, 14 of osteoarthritis, 15 of previous trauma, 14 of other rheumatic diseases. In 137 patients no clinical diagnosis had been made yet. In 103 cases bilateral involvement was present; for this reason 528 shoulders were studied totally. Moreover both the shoulders of 198 healthy control subjects were examined. They were 109

female and 89 male and their mean age was 56.3 years (range 19-69).

Using a combination of already reported techniques, sonography of the shoulder was performed using a 7.5 MHz linear transducer. Investigations included the long head of biceps tendon (peritendinous effusion, thickening, thinning, tears, echotexture changes); the supraspinatus tendon, the infraspinatus tendon and the subscapularis tendon (thickening, thinning, tears, echotexture changes); the subacromial and the subscapularis bursae (effusion); the acromioclavicular joint (irregularity, effusion); the glenohumeral joint (effusion). Moreover calcifications were searched for. The chi square was used for statistical analysis of the results.

Results Generals Results are reported on Table 1.

In 25 patients (5.9%) sonography did not show any changes of articular and periarticular soft tissues of the shoulder girdle.

Calcifications were found in 38 cases (72%, $p < 0.00001$).

Abstract OP0124 Table 1 Prevalence of alterations of the single structures studied

	Cases (n = 528)	Controls (n = 396)	p
Long head of biceps tendon	254 (48.1%)	8 (2.0%)	< 0.00001
Supraspinatus tendon	314 (64.6%)	15 (3.8%)	< 0.00001
Infraspinatus tendon	89 (16.8%)	1 (0.25%)	< 0.00001
Subscapularis tendon	23 (4.3%)	0 (0.0%)	< 0.00001
Acromionclavicular joint	270 (51.5%)	11 (2.8%)	< 0.00001
Glenohumeral joint	59 (11.2%)	0 (0.0%)	< 0.00001
Subacromial or subscapularis bursae	85 (16.1%)	0 (0.0%)	< 0.00001

Conclusion The present study showed the high diagnostic capacities of sonography in the detection of changes of the soft tissues of the shoulder in patients with shoulder pain. The sensitivity of the technique is confirmed by the finding of alterations in 94.1% of cases. The girdle's complex anatomy makes it difficult to identify alterations by clinical examination, and the application of other diagnostic techniques is often limited by the high costs and the low availability of equipment. In contrast, sonography is a noninvasive and low cost imaging method that can be applied successfully to the study of shoulder's disorders. As well, it is also valuable for monitoring the therapeutic response and for the possibility of ultrasound guided interventions.

SAT0184 SCREENING FOR OSTEOPOROSIS BY CALCANEUS ULTRASONOGRAPHY IN ANKYLOSING SPONDYLITIS

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Background Ankylosing spondylitis (AS) is a chronic rheumatic disorder resulting in axial deformation due to (osteo)sclerosis and postinflammatory vertebral decalcification. Therefore measuring axial bone density is complicated in AS. Limited data are available on the potential role of quantitative ultrasound (QUS) for screening of osteoporosis in a high-risk patient group with AS. We evaluated test characteristics of Sahara calcaneus QUS by comparison with data from dual-energy X-ray absorptiometry (DEXA) in AS.