reduced risk of PUBs. Although the cause and actions of PAO are not well understood it is generally accepted that COX-2 plays an important role.

Methods In a prospective study we compared the results of 25 mg rofecoxib once daily on preventing severe PAO after THR with results of diclofenac out of the literature. Our 137 patients take 25 mg rofecoxib once daily starting on the first or second day after THR. The mean duration of drug administration was 13.8 days. 72 hips could be evaluated after 3 months, further 65 hips after 6 months.

Results The ossification was evaluated on pre- and postoperative x-rays of the pelvis. There was no difference between the results after 3 and 6 months. 96 (70%) of the hips showed no signs of PAO, 40 (29%) hips had Brooker 1 (ossifications up to one cm), only one hip (1%) Brooker 2 and none of the hips had severe bone formation Brooker 3 or 4 (bridging ossification between femur and pelvis). Results of diclofenac or irradiation therapy in the literature show similar results: Brooker 1 and 2: 11–40% and no severe Brooker 3 and 4.

Abstract OP0127 Table 1

	Therapy	n	Brooker	Brooker 1	Brooker 3
			0 %	+2 %	+4 %
Eulert <i>et al.</i> 1997 ²	no	317	36,3	41,3	22,4
Sell <i>et al.</i> 1998 ³	3 × 50 mg Diclofenac	77	76,6	23,4	0
Sell <i>et al.</i> 1998 ³	3 × 3,3 Gy post-op	77	97,4	2,6	0
Zacher <i>et al.</i> 2001	1 × 25 mg Rofecoxib	137	70	30	0

Conclusion 25 mg of the COX-2 inhibitor Rofecoxib administered once daily after THR starting one or two days after surgery for 2 weeks can securely prevent the formation of periarticular ossification (PAO) of severe grade (Brooker 3 and 4). Minor ossification without functional impairment (Brooker 1–2) were found in 30%. 70% of the hips showed no signs of postoperative ossification. These findings are comparable to the results of prevention with irradiation therapy or standard NSAIDs like diclofenac (100–150 mg).

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OP0128 FEMORAL NECK FRACTURES IN OSTEOPOROTIC PATIENTS

DN Stratan, M Popa, O Alexa, L Stratan. *Rheumatology, University of Medicine and Pharmacy "Gr. T. Popa", Iasi, Romania*

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Background

Objectives The aim of the study was to evaluate the role of osteoporosis in the treatment of the femoral neck fractures.

Methods One hundred and twelve patients with femoral neck fractures were treated in our department in two years. The average age of the patients was 68.3 years old (47–91 years old). Fractures were classified according Garden classification and the degree of osteoporosis was appreciated for each patient using Singh system of classification. The treatment was related to the age, displacement of the fracture and degree of osteoporosis.

Osteoporosis (Singh I-III) was recorded in 73 patients (65.2%). Most of the fractures of patients with osteoporosis were displaced (Garden III-IV). The undisplaced fractures were treated by internal fixation with three cannulated screws in all cases regardless the degree of osteoporosis (22 patients). We avoided internal fixation in patients with osteoporosis and displaced fractures at whom the arthroplasty was the first choice of treatment:

- hemiarthroplasty with an Austin Moore prosthesis was the indication of choice in patients with a life expectancy less than five years (9 patients);
- the cemented bipolar prosthesis was preferred in patients with a non-affected acetabulum (52 patients);
- the cemented prosthesis was indicated in patients with a marked degree of osteoporosis (Singh I-III) or in those with a preexisting diseased acetabular cartilage affecting the ipsilateral hip (20 patients);
- the uncemented prosthesis was rarely used, in patients under 65 years old with a Singh index IV-VI (8 patients).

Results Following this treatment very good and good results (according Merle d'Aubigne scale) were noted in 68% of cases. We have also to emphasise that in 80% of the cases treated by cemented bipolar prosthesis, the patients could return to their normal prefracture level of physical activity.

Conclusion Osteoporosis must be taken into account when the operative technique for a femoral neck fracture is considered. Singh system seems to be very useful for the prognosis and management of this type of fractures. However from all the prosthesis the bipolar type seems to be the best choice in patients with osteoporosis and a fracture of the femoral neck and the cemented variant is offering the best functionality of the involved hip.

SAT0112 VARIATIONS IN POPULATION'S PYRAMIDS OF PATIENTS WITH CHRONIC LOW BACK PAIN IN A RURAL AREA

FP Torres, D Ybañez-García, P Pérez-Caballero, M Morales, A Llópis. *Rheumatology, General Hospital Requena (Valencia), Requena, Spain*

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Background

Objectives To analyse the differences in the variables age and sex of patients with chronic low back pain, regarding the general population.

Methods It was carried a longitudinal study out of the patients that they went to the External Consultation of Rheumatology from the Requena Hospital (Valencia), demanding specialised attendance to present a chronic low back pain, sex and age were picked up. A statistical study was realised determining absolute and relative frequencies, and chi2 test with a level of trust of 95%.

Results A total of 483 patients were selected, males 146(30.2%) and women 337(69.8%), with a relationship female/male of 0.43. The mean age was of 55.82 ± st 13,32 and range 16–90. In women it was of 56,90 ± st 13,13 and in males of 53,32 ±

st 13,47. It was found a significant relationship between age groups and sex ($p < 0.05$).

Abstract SAT0112 Table 1

	Total population	Total patients with low back pain	Significance
< 35 years old	5414 (37.3%)	46 (9.5%)	$p < 0.0001$
36–45 years old	2195 (15.1%)	56 (11.6%)	$p < 0.0001$
46–55 years old	1750 (12%)	103 (21.3%)	Significance
56–65 years old	2136 (14.7%)	163 (33.7%)	Absence
>65 years old	3030 (20.9%)	115 (23.8%)	$p < 0.0001$
			Significance
			Absence

Conclusion

- Prevalence of the feminine sex, with variations in the age groups. It was more accused after the 65 years old.
- Regarding the general population, the LBP it's exceptional in patients minor of 35 years and it is more frequent in patients older than 46 years, existing the biggest differences in the groups 46–65 years old.

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SAT0113 TOTAL METACARPO-PHARANGEAL ARTHROPLASTY IN RA

¹N Murata, ²M Saito, ²S Wakitani, ²K Imoto, ³K Masada, ⁴M Goto, ⁵Y Komatsubara. ¹Rheumatology; ²Orthopedics, Osaka-Minami National Hospital, Kawachinagano; ³Orthopedics, Osaka Rosai Hospital, Sakai; ⁴Rheumatology, Otsuka Capital Hospital, Tokyo, Japan; ⁵Orthopedics, Yukioka Hospital, Osaka

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Background It is no exaggeration to say that most of the patients with rheumatoid arthritis (RA) suffer from finger's dysfunction. Although the total arthroplasty for hip joint and knee joint have brought great benefit for RA patients, total arthroplasty for the upper extremity has not been developed enough. We have contrived new total metacarpophalangeal arthroplasty (TMPA) for 4 years and half.

Objectives TMPA have been done in 126 patients (136 hands); 106 RA, 16 post-injury, 4 others.

Methods TMP joint is composed with the metacarpal head made of titanium and polyethylene socket with stem. Socket stem is capable to slide into titanium sleeve that is fixed in basal phalangeal cavity with cement.

Results In RA patients TMPA have been done in 106 patients, 114 hands (85 right hands and 29 left hands), 14 thumbs and 291 fingers. Revision was done in 5 patients and removal of TMP joint was done in 6 patients for technical errors in most cases. But the cause of revision in 2 cases is breakage of the polyethylene stem, so we are amending it now.

Conclusion We have contrived new TMP joint and have done TMPA in 106 RA patients, 114 hands, 14 thumbs and 291

fingers. Polyethylene breakage occurred in 2 fingers, so reinforcement of polyethylene stem is necessary.

SAT0114 PULMONARY EMBOLISM AFTER BILATERAL TOTAL KNEE ARTHROPLASTY

N Masahiko, M Kouno, H Kawata, M Murata, H Koseki, A Taguchi. *Orthopaedic Surgery, Nagasaki Red Cross Atomic Bomb Memorial Hospital, Nagasaki, Japan*

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Background Bilateral total knee arthroplasty (TKA) for bilateral knee repair has many advantages. It is cost effective and allows for rehabilitation under a single admission. However, bilateral TKA is a more aggressive procedure than unilateral TKA. Furthermore, complications of pulmonary embolism (PE) occur at a greater frequency than with unilateral TKA, and blood transfusion is often necessary. We retrospectively studied a series of patients and prospectively investigated the prevention of PE.

Objectives

Methods Between 1997 and 2000, 113 patients underwent primary bilateral TKA via a cementless procedure at our hospital. From May 2000, all patients underwent bilateral TKA without a tourniquet. Patients were categorised into four groups, and the incidence of PE was determined.

In Group 1 and 2, respectively, RA patients underwent TKA with or without a tourniquet. In Group 3 and 4, respectively, OA patients underwent TKA with or without a tourniquet.

The diagnosis of PE was made by lung perfusion scintigraphy as respiratory failure, and blood loss was assessed after TKA according to the decline in haemoglobin (HB).

Blood loss = Total Blood Volume (TBV) = (1-HB postope/HB preope).

We analysed all patient-related variables using a chi-squared test.

Results The incidence of PE was 21.1% in Group 1 (8/38), 0.0% in Group 2 (0/3), 23.6% in Group 3 (13/55), and 0% in Group 4 (0/17).

The incidence of PE did not differ significantly between RA and OA.

For surgery without a tourniquet, the incidence of PE in Group 2 and Group 4 was significantly lower than for surgery with a tourniquet ($p = 0.0185$).

Mean calculated blood loss was 988 ml in Group 1, 1091 ml in Group 2, 1421 ml in Group 3, and 1412 ml in Group 4.

However, the amount of blood loss did not differ significantly between surgery with a tourniquet and surgery without ($p = 0.3083$), but was significantly different between RA and OA ($p < 0.0001$).

Discussion We performed bilateral TKA without a tourniquet to reduce the risk of PE. Reported causes of PE in TKA include the use of a tourniquet and an intramedullary alignment system. When TKA was performed without a tourniquet, thrombosis and fat emboli did not flow into pulmonary arteries, and all emboli were expelled with extracorporeal bleeding.

The major problem associated with TKA without a tourniquet is blood loss, and few studies have examined the benefits of using a tourniquet. We estimated blood loss by calculating the decline of haemoglobin. The results suggested that blood loss did not differ significantly between tourniquet procedures and no tourniquet procedures.

Conclusion In conclusion, the possibility was suggested of preventing PE in TKA without the use of a tourniquet.