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

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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

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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.