

PMS54

GAP BETWEEN PATIENT-REPORTED ESTIMATION ON FRACTURE RISK AND THE WHO ASSESSMENT TOOL (FRAX®) IN POSTMENOPAUSAL OSTEOPOROSIS

Pentek M¹, Horváth C², Érsek K¹, Bajji P¹, Bors K³, Csutor E⁴, Furi J⁵, Hacsuncz M⁶, Horváth B⁷, Kárpáti S⁸, Boncz I⁹, Korányi A¹⁰, Rápolthy I¹¹, Tamási L¹², Tóth E¹³, Gulácsi L¹, Brodszky V¹

¹Corvinus University of Budapest, Budapest, Hungary; ²Semmelweis University, Budapest, Hungary; ³Rehabilitation Hospital and Spa of Visegrád, Visegrád, Hungary; ⁴Budavár Local Government Healthcare Service, Budapest, Hungary; ⁵Ferencváros Health Care Service, Budapest, Hungary; ⁶Saint John's Hospital, Budapest, Hungary; ⁷Thermal Spa Hospital, Sopron-Balf, Hungary; ⁸Zugló Health Care Service, Budapest, Hungary; ⁹University of Pécs, Pécs, Hungary; ¹⁰Saint Borbála Hospital, Tatabánya, Hungary; ¹¹Health Care Service Centre II. of Székesfehérvár, Székesfehérvár, Hungary; ¹²Saint Francis' Hospital, Miskolc, Hungary; ¹³Flór Ferenc County Hospital, Kistarcsa, Hungary

OBJECTIVES: The FRAX® model recently developed by the WHO calculates 10-year probability of major osteoporotic and hip fracture, offering new basis for medical decision making and health economic analysis in osteoporosis (OP). [http://www.shef.ac.uk/FRAX/]. Patients' ideas regarding fracture risk and longevity might influence their perception of 10-year fracture risk data and compliance, and as a consequence, successful implementation of FRAX® based thresholds in everyday OP care. Our aim was to study whether FRAX® data differ from OP patients' and attendant specialists' self-estimations on fracture risk. We also assessed expectations on longliving which is a crucial point to perceive the 10-year fracture risk projection of FRAX® relevant. **METHODS:** In 2009 a cross-sectional survey was performed in 10 Hungarian rheumatology centres. Postmenopausal OP patients appearing on routine visit and switching to second line antiprotic drug were involved. Demographics, main clinical characteristics were registered. Patients' estimation on 10-year fracture risk and longliving were surveyed. Physicians' expectations on patients' perspectives were likely detected. FRAX® was calculated and matched with the estimations. **RESULTS:** 224 patients were involved, mean(SD): age 69.5(8.9)years, duration of OP care 6.7(5.1) years, lumbar Tsc-3.17(0.82), femoral Tsc-2.69(0.87), 133(59.4%) patients had OP fracture previously. Health status VAS was 59(17)mm. FRAX®-major OP fracture was 26(15.7)%, patients estimated 32.7(25.8)%, physicians marked 29.9(21.4)%. Results for hip fracture were: FRAX® 12.6(15.3)%, patients 26.7(25.3)%, physicians 21.5(19.1)% ($P < 0.01$). Patients' expected to live until age 82.4(8.2)years, physicians' estimation was nearly same (82.5, SD7 yrs). Less than 10-year survival was expected by 42.4% and 33.7%, respectively. **CONCLUSIONS:** Both patients and physicians overestimate fracture risk, especially for hip. Patients often expect to live shorter than the time-frame of the fracture risk projection. These aspects should be highly considered in health communication and also in the application of the FRAX® method in clinical practice.

PMS55

ANALYSIS ON THE POSSIBLE ASSOCIATION BETWEEN RHEUMATOID ARTHRITIS AND DIABETES MELLITUS TYPE 2

Laires P¹, Fonseca JE¹, Garcia EB²

¹Faculty of Medicine, University of Lisbon, Lisbon, Portugal; ²BioEPI, Clinical and Translational Research Center, Lisbon, Portugal

OBJECTIVES: Rheumatoid Arthritis (RA), a chronic inflammatory disease, may predispose to the development of Type 2 Diabetes Mellitus (T2DM). We aimed to compare incidence rates of T2DM in RA versus non-RA populations and study the influencing factors. **METHODS:** The study population consisted of participants in the National Data Bank for Rheumatic Diseases (NDB), where patients with rheumatologic disorders completed semiannual questionnaires, from 1998 through 2008. Osteoarthritis (OA) patients were used as controls. T2DM was determined based on self-reports of disease and on the use of hypoglycemic medication. The association between RA and T2DM was investigated using COX logistic regressions adjusted for relevant clinical and demographic covariates. **RESULTS:** A total of 14,481 participants diagnosed with RA (79.5% female; mean age 58.1 years) and 3,441 participants diagnosed with OA (84.5% female; mean age 63.6 years) were followed during 69,943 person-years. RA subjects had lower Body Mass Index (BMI) and less major comorbidities than controls. In patients with RA the T2DM incidence rate was 10 per 1000 person-years, while the incidence rate for OA was 15 per 1000 person-years. Both rates are superior to most estimates calculated among the US population. However, the covariate-adjusted risk of T2DM in patients with RA versus OA was not significant (HR = 0.94; 95% CI: 0.79-1.12, $p = NS$). Male gender, age, BMI, non-caucasian ethnicity, major comorbidities, low education level and prednisone intake were significantly associated with the incidence of T2DM. Some RA drugs had a clear protective role on TDM2, mainly methotrexate (19% risk reduction; $p = 0.022$) and hydroxycloquinone (47% risk reduction; $P < 0.001$). **CONCLUSIONS:** RA *per se* is not associated with increased risk of T2DM. Both RA and OA are associated with known TDM2 risk factors, such as BMI and some comorbidities, increasing the incidence rates of TDM2. Some drugs for RA treatment have a significant protective effect on the TDM2 risk.

PMS56

DETERMINING THE OPTIMAL TIMING FOR TOTAL KNEE REPLACEMENT

Ko Y¹, Lo NN², Yeo SJ², Yang KY², Yeo W², Chong HC², Thumboo J²

¹National University of Singapore, Singapore; ²Singapore General Hospital, Singapore

OBJECTIVES: Total knee replacement (TKR) is a commonly used surgical procedure for patients with severe joint damage caused by arthritis; however, there remain difficulties in establishing criteria to define the optimal timing for TKR. The aim of this study was to identify the preoperative threshold HRQoL scores that were associated with better postoperative outcomes and those associated with greater improvement. **METHODS:** Data were collected from 1715 patients undergoing TKR between 2001 and 2006. Patients were interviewed at baseline and at 6 months and 2 years after surgery. At all three interview sessions, patients were asked to complete the Short-Form (SF-36) and the Oxford Knee Score (OKS). As physical function and pain have been identified as the key domains in osteoarthritis, the OKS and the physical functioning (PF) and bodily pain (BP) scales of the SF-36 were selected as the outcome measures of this study. Summary statistics were computed for preoperative, postoperative, and improvement in outcome scores. Visual inspection of the simple error bar charts were used to identify the threshold preoperative scores that were associated with better postoperative scores and those associated with more improvement. **RESULTS:** Patients with poorer preoperative HRQoL had worse postoperative outcomes but experienced greater improvement after TKR compared to those with better preoperative HRQoL. The highest postoperative PF scores are associated with a preoperative PF score of 50 points and above, whereas the baseline threshold OKS score was between 35 and 40 points, a baseline PF score of <30 points and an OKS score of >40 points are associated with the greatest improvement. No clear leveling off pattern was observed in the BP scores. **CONCLUSIONS:** PF and OKS threshold scores associated with optimal outcomes of TKR were identified in this study. Future research is needed to examine the predictive value of the scores identified in improving patients' post-operative outcomes.

PMS57

HEALTH-RELATED QUALITY OF LIFE AFTER TOTAL KNEE REPLACEMENT OR UNICOMPARTMENTAL KNEE ARTHROPLASTY IN AN URBAN ASIAN POPULATION

Ko Y¹, Narayanan S¹, Wee HL¹, Lo NN², Yeo SJ², Yang KY², Yeo W², Chong HC², Thumboo J²

¹National University of Singapore, Singapore; ²Singapore General Hospital, Singapore

OBJECTIVES: To examine health-related quality of life (HRQoL) following total knee replacement (TKR) or unicompartmental knee arthroplasty (UKA). **METHODS:** Asian adult patients undergoing either TKR or UKA in a hospital of Singapore between 2001 and 2006 were interviewed before surgery and 6 and 24 months post-operatively to obtain demographic information and HRQoL using the Short-Form (SF-36) and the Oxford Knee Score (OKS). **RESULTS:** Data were collected from 2243, 1715, and 1113 patients at baseline, 6, and 24 months, respectively. TKR patients had a lower preoperative score than UKA patients on OKS and four subscales of the SF-36 ($p < 0.01$). Both TKR and UKA patients' OKS and SF-36 subscale scores improved six months postoperatively except in the general health domain. SF-36 role physical (RP) and bodily pain (BP) scores showed the most improvement (40.9 and 33.0 points in TKR and 36.9 and 31.4 points in UKA patients, respectively). The most substantial improvements between baseline and two years after surgery were in the physical domains of HRQoL (RP, BP, and physical functioning (PF)). In addition, in both groups, five domains of SF-36 (RP, BP, PF, social functioning, and role limitations due to emotional problems) reached the proposed minimal clinically important difference of ten points. TKR patients' SF-36 and OKS scores were not significantly different from those of UKA patients two year after surgery, except PF scores. Multiple regression analysis adjusting for sociodemographics showed that baseline scores were a significant predictor of the postoperative scores of OKS and all SF-36 subscales ($p < 0.01$), whereas the type of surgery was not associated with the postoperative scores. **CONCLUSIONS:** Both TKR and UKA patients experienced significant improvements in HRQoL, particularly in the RP and BP domains. After controlling for potential confounding variables, the type of surgery was not a significant predictor of patients' postoperative HRQoL scores.

PMS58

CLINICAL OUTCOMES AND CHANGES IN QUALITY OF LIFE IN WOMEN WITH OSTEOPOROSIS TREATED WITH TERIPARATIDE: 36 MONTH RESULTS OF THE FRENCH PATIENTS PARTICIPATING IN THE EUROPEAN FORSTEO OBSERVATIONAL STUDY (EFOS)

Rajzbaum G¹, Tcherny-Lessenot S², Iiu-Leage S², Gehchan N², Barrett A³

¹Saint Joseph Hospital, Paris, France; ²Lilly France, Suresnes, France; ³Eli Lilly & Company Ltd, Windlesham, Surrey, UK

OBJECTIVES: To describe back pain, and HRQoL in postmenopausal women with osteoporosis treated with teriparatide (Forsteo®) in France. **METHODS:** European, prospective, observational study of 36 months duration (18-month active treatment phase and 18-month post-treatment follow up) in postmenopausal women with osteoporosis who initiated teriparatide. HRQoL measured by EQ-5D and back pain measured by a Visual Analogue Scale (VAS) and a questionnaire were collected at each follow-up visit. **RESULTS:** Among 309 patients enrolled in France (18.8% of the total EFOS cohort), 290 (94.5%) had any follow-up data, and 201 (65.0%) completed the last post-treatment visit. At baseline, patients were 73.8 (7.4) years old (mean (SD)),