who do not speak the Dutch language; those with previous ACL injury or meniscus or cartilage damage (diagnosed by an orthopaedic surgeon or sports physician); those with previous surgery of the involved knee; those with disabling co-morbidity; and those with already osteoarthritic changes on X-ray (Kellgren & Lawrence > 0) will be excluded. As control group (n=80) the healthy knee of the patients will be used (with similar exclusion criteria).

Patients will be recruited at the outpatient clinic of the department of orthopaedics of Erasmus Medical Center (Rotterdam) and the department of orthopaedics or sports medicine of Medical Center Haaglanden (The Hague). The expected recruitment period was 1 year. Unfortunately this period needed to be extended. We started with inclusions in February 2009 and the current expectation is to obtain the inclusion of 160 patients in September 2010. There were several reasons for this delay, of which two in particular. First, a lot of patients were excluded because of their age (> 45 years or < 18 years). Second, a lot of patients visited the outpatient clinic with initial trauma of longer than 6 months ago.

Measurements: Patients are asked to fill in several questionnaires (VAS for pain, Lysholm score, Tegner activity scale, KOOS, IKDC 2000 subjective, SF-36, SQUASH). Physical examination of both knees is performed (range of motion, stability tests, KT-1000 arthrometer, one leg hop test). X-ray (weight-bearing antero-posterior, lateral and Rosenberg view), a DEXA scan (with the knee in standard position) and MRI of both knees are made. First, the X-ray is evaluated whether OA changes are present (Kellgren & Lawrence > 0). In addition, the X-ray and DEXA scan measurements are used for evaluating the bone shape and bone density changes over time (active shape modeling). To identify early degenerative changes on MRI, we will use the Knee Osteoarthritis Scoring System (KÖSS), a semi quantitative, multi-feature scoring method, reported by Kornaat et al. Serum and urine are collected for assessment of biomarkers. At the end of the study a combination of biomarkers will be determined.

Results: At this moment the recruitment period is still ongoing. At the 30th of April 2010 109 patients were included, of which 66% is male. The median age of the included patients is 25 years (range, 18 to 45 years) and the median Tegner activity scale, before trauma, is 9 (range 3 to 10).

FUNCTIONAL IMPAIRMENT IN PATIENTS WITH FEMOROACETABULAR IMPINGEMENT WITHOUT RADIOGRAPHIC OSTEOARTHRITIS

C. Orellana, N. Navarro, M. Moreno, E. Casado, M. García-Manrique, J. Gratacos, M. Larroza Hosp. de Sabadell (Parc Taull), Sabadell, Spain

Purpose: To assess functional impairment in patients with clinical and radiological evidence of FAI and without evidence of OA by plain radiography.

Methods: A prospective study including consecutive patients aged <50 years who consulted for hip syndrome clinically and radiologically suggestive of FAI. We analyzed demographic and anthropometric variables, radiological FAI type, pain intensity (VAS 0-100 mm), presence of pain at night). We evaluated the severity of functional impairment using the Lequesne hip index.

Results: We analyzed 31 patients (19M/12H), mean age 40.8±6.5 years, evolution time was 33.8±9 months. Ten patients (32.25%) had a mild (1-4 points) and 11 (35.5%) a moderate (5-7 points) Lequesne index, while 8 (25.8%) had a severe (> 7 points) and 2 (6.5%) had a very severe (> 11 points) Lequesne index. Patients with a Lequesne index severe or very severe had an evolution time significantly lower (19.9±7.7 vs. 40.1±38 months, p < 0.05) compared with those with mild to moderate severity. Patients with FAI more severe functional impairment were predominantly males (50 vs. 33.3%), showed higher pain levels (VAS 5.57±2.1 vs. 4.34±1.8 cm), practiced sports and/or were engaged in more vigorous activities (55.6 vs. 28.6%) and had a radiological cam type FAI (50 vs. 38.9%), although neither was statistically significant, probably due to small sample size.

Conclusions: Patients with FAI appear to have significant functional impairment even before radiological osteoarthritic changes were observed. The shorter time of evolution in those with greater functional impairment could be related with the existence of a group of poor prognosis in which progressive deterioration is rapid, especially in association with activities that involve stress on the hip.

“ULTRA-EARLY” DETECTION OF THE KNEE OSTEOARTHRITIS

M. Kobayashi1, S. Nakamura1, R. Arai1, Y. Okamoto1, Y. Mizuno2, Y. Nakagawa1, T. Nakamura1
1Kyoto Univ., Kyoto, Japan; 2Kyoto Katsura Hosp., Kyoto, Japan; 3Kyoto Med. Ctr., Kyoto, Japan

Purpose: Localized cartilage lesion is known to exist several years before radiological knee osteoarthritis (OA) is manifested. It is critical for early detection and prevention of knee OA to find so-called “ultra-early” lesions. The purpose of this study is to describe clinical features of the “ultra-early” knee OA.

Methods: During 5 years between 2004 and 2008, 265 consecutive arthroscopic surgeries were performed in our institute. In three knees (1.1%) out of 265, ICRS grade IV total cartilage defect was found arthroscopically, even though Kellgren-Lawrence (KL) radiological OA grading was diagnosed as grade 0 (normal). The medical records of these three cases were retrospectively reviewed and clinical features were described.

Results: These three cases were all females aged 36, 40 and 55 years whose BMI was 25.8, 24.5 and 17.7 kg/m², respectively. They suffered from medial knee pain on a single joint without any prior trauma and conservative treatment for more than three months failed using oral and/or percutaneous NSAIDS administration. KL radiographic OA grading was all grade 0. Lower extremity alignments were all neutral on standing plain radiographs. MRI showed cartilage defect on weight bearing surface of medial femoral condyle (MFC) or bone attrition at subchondral lesion of MFC. Diagnosis of ICRS grade IV was defined arthroscopically, and kissing lesion on medial tibial plateau was none or minimal (ICRS grade 0–I). Two of them were successfully treated osteochondral autogenous transfer (OAT), and the rest is scheduled for OAT.

Conclusions: Knee OA is gradually progressive degenerative joint disease so that its prevention and early detection are important. The results of this study showed that both MRI and arthroscopic examinations were crucial for detection of “ultra-early” knee OA. Physicians should keep these lesions in mind even though there is no radiographic feature of knee OA.

EXPECTATIONS REGARDING TOTAL KNEE JOINT REPLACEMENT: VIEWS FROM PATIENTS AND CARE PROVIDERS

M. Hirschhorn1, J. Ravaud2, F. Rannou3, S. Poiradeau3
1Department of sociology, Université ParisDescartes, Paris, France; 2CERME, INSERM, Université ParisDescartes, Paris, France; 3AP-HP, Université ParisDescartes, Paris, France

Purpose: Total knee arthroplasty (TKA) is considered as one of the most effective treatment of disabling knee osteoarthritis and its main goals are to increase function and diminish pain. However, patients’ satisfaction about surgery is not always closely correlated with better function and less pain and may be more related with fulfilling their expectations. Therefore, the assessment of patients’ expectations regarding the benefits of knee replacement surgery is recommended. Better understanding expectations of patient and care providers about TKA could help increasing satisfaction with surgery, but few qualitative studies have been performed in this field. We aimed to identify expectations of patients and care providers regarding TKA and to reveal potential obstacles for improvements of management strategies.

Methods: A qualitative study based on semi structured interviews was performed with a stratified sample of 20 patients (11 women, 12 with TKA since one month to 5 years) and 18 care providers (6 women, 6 general practitioners (GPs), 5 rheumatologists, 5 orthopedic surgeons, 2 physical therapists).

Results: Patients’ expectations were variables and depended on treatment duration before TKA, material adaptations, vision of the world (optimistic or pessimistic), and more classical sociological variables such as age, gender, social position. Main expectations verbalized by patients concerned satisfaction with pain, rehabilitation program, disability, and personal integrity. Patients expected from surgeons a personalized management, to spend more time with them, to be reassuring, to give all important informations, to be honest about outcomes, to be competent. Concerning pain patients expected to experience no or minimal pain. Rehabilitation was expected to be rapid and efficient and to be a support to learn to live with TKA. Disability was expected to significantly diminish in order to be able to work;