

program included deep breathing exercises, active ankle range of motion (ROM), lower-limb isometrics including quadriceps, hamstrings and gluteal sets, full and progressive isotonic and isometric knee and hip muscle strengthening. Hydrokinesitherapy was practiced from the second to the fourth post-operative month and every 6 months thereafter.

**Results** After knee surgery all patients achieved 90° knee flexion minimum and full knee extension. At follow-up (range 3–7 years) clinical assessment showed that 3 out of 10 patients achieved a significant improvement of ROM with full knee extension and flexion >90°. These patients completed the post-operative rehabilitation program and continued to follow hydrokinesitherapy cycles.

**Discussion** Four patients showed full knee extension but flexion of maximum 80°. These patients were not fully compliant to the rehabilitation program. The remaining 3 patients did not maintain complete knee extension and their flexion was 40° in average. These patients were poorly adherent to the rehabilitation program since the early post-operative phase.

**Conclusions** In spite of the small study sample, our data remark the crucial role of an intensive and continuous rehabilitation program in determining functional outcome after TKR. Efforts should be devoted to improve adherence of patients to rehabilitation programs.

#### ACL reconstruction with BPTB: optimization of the technique and results

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**Introduction** ACL injuries are one of the most frequent lesions in Athletes. Surgical treatment aims to bring stability of the knee and resumption of the previous sporting activities. We describe our experience in ACL reconstruction with BPTB in a group of high demand athletes.

**Materials and methods** From September 2008 to September 2011 we selected and treated 78 patients: 54 male and 24 female with an average age of 25 years. All patients were assessed with an average follow-up of 26 months (12–36), using three evaluation sheets: Lysholm, Tegner and IKDC.

**Results** There were no complications such as patella fractures, infections, TVP, Cyclope syndrome and joint limitation. All patients resumed previous sporting activities.

**Discussion** During the surgical procedure, we paid particular attention to the anatomical placement of femoral tunnel, using the medial accessory portal and flexible drills. For femoral fixation we used the cortical suspension device Zip-Loop.

**Conclusions** BPTB is an excellent solution for ACL reconstruction in H-D athletes with respect of surgical anatomical reconstruction.

#### Initial experience with Vanguard® total knee arthroplasty

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**Introduction** Biomet Vanguard® Complete Knee System is a total knee replacement system, introduced into the market in 2003: this

system boasts a designed kneecap track or groove which allows for greater mobility and decreased loss of healthy bone during the replacement process. Clinical and radiographic results in Varese Orthopaedics Unit initial experience are reported.

**Materials and methods** Clinical and radiographic parameters are evaluated in 29 patients who underwent TKA (Vanguard® Complete Knee System- Biomet Inc.) for primary gonarthrosis during the last 2 years at Orthopaedics and Traumatology Unit of Ospedale di Circolo—Fondazione Macchi in Varese. ROM, type of anaesthesia, patellar pain, clinical and functional Knee Score (pre-operative), size of implant, ROM, bleeding, patellar pain, VAS, clinical and functional Knee Score (post-operative) are analyzed. Radiographic follow-up is made at 6 and 12 months.

**Results** Clinical and Functional Knee Score respectively improve from 47 to 88 pts and from 51 to 88 pts in pre- and post-operative period ( $p < 0.001$ ). Post-operatively no patellar pain, 2 pts VAS and 1215 cc bleeding are reported. ROM doesn't significantly improve from pre- to post-operative. No relevant complications are reported. Due to the short follow-up, radiographic evaluation does not allow to demonstrate polyethylene liner wear.

**Conclusions** Vanguard® Knee Replacement significantly shows a clinical and functional improvement in patients affected by primary gonarthrosis. Moreover, post-operative pain decrease allows early mobilization and rehabilitation.

#### C69—HIP 8

##### The large diameter in hip replacement surgery: a clinical and radiological analysis of our experience 4-year after implantation

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**Introduction** Currently the use of new metal–metal coupling joints, ceramic–ceramic and metal-crosslinked polyethylene has allowed to considerably reduce the wear of materials that become an integral part of the prosthetic components. In hip replacement surgery the heads of large diameter are used due to its advantages will primarily related to lower risk of dislocation and greater range of motion that results.

**Materials and methods** We conducted a review of case studies with a follow-up to 3 years of 84 patients in whom a hip prosthesis was implanted with a large diameter head. Patients were operated at the Orthopaedic Clinic of the University of Sassari in the period between 2007 and 2010. The average age of patients was 70 years. In all cases the arthroplasties were implanted with a cementless acetabular component press-fit fixation and meta-diaphyseal stems.

**Results** The analysis was conducted by standard X-rays that made it possible to appreciate the good integration of the prosthetic acetabular component and the femoral stem, was also carried out a careful clinical examination, which was followed by the administration of the questionnaire Harris Hip Score. We have found no cases of dislocation or loosening of the components. The follow-up was at 3, 6 and 12 months.

**Discussion** At six-month follow-up control patients reported no pain in the hip operated at rest, standing and walking on flat ground, mild pain going up and down stairs was present in 9 patients. The range of motion was evaluated through the analysis of hip flexion in a sagittal plane, the decline in total average was 104° (range 90–130). This result is significantly important, as in the control group of patients