P013-e  
**Full thickness patellar tendon tears: Functional outcome in 24 cases**  
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**Keywords:** Patellar tendon; Total rupture; Surgery; Rehabilitation

**Introduction.** Patellar tendon tears are rare but very disabling. Most result from traumatic injury in active subjects. The diagnosis is essentially clinical. Plain radiography may show patella alta and ultrasound may be useful to confirm the diagnosis. MRI is contributive if the case is atypical or seen late. Our objective was to determine the functional outcome of patients operated on for patellar tendon tears.

**Materials/Patients and methods.** This was a retrospective study of 24 cases operated for patellar tendon rupture and followed in our department for physical therapy, during the period from January 2006 to December 2011. The assessment made in after surgery, has included an evaluation of the mobility of the knee joint and quadriceps strength.

**Results.** There were 19 men and three women, mean age 31.3 years (21–44 years). The ruptures were fresh in 18 cases and neglected in six cases. The trauma mechanism involved an eccentric muscle contraction in 19 cases, including 16 sports injuries. The remaining five cases were spontaneous tears in three patients on glucocorticoid therapy including two bilateral tears. Recovery of joint motion and quadriceps strength were good in 15 cases, fair and poor in nine cases including the spontaneous and neglected tears.

**Discussion.** Our results are comparable with literature data and confirm the good functional results obtain in post-traumatic and fresh patellar tendon tears compared with spontaneous or neglected tears. Rehabilitation plays a very important role in function of healing time. We emphasize the importance of continuous controlled exercises to reduce the incidence of pain of the extensor system early during the rehabilitation period, and of progressive eccentric work to improve both intensity and amplitude later.

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P015-e  
**Effects of a walking training session with a walking aid robot for patients holding a total knee arthroplasty**  
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**Keywords:** Total knee arthroplasty; Gait; Walking aid robot

**Introduction.** Gonarthrosis is a major cause of disability in the elderly (Minns Lowe et al., 2007). It is responsible for increasing pains leading to functional impairment in walking and characterized by limping and progressive acquisition of pathological walking pattern (Haydar et al., 2003). Nowadays, one of the reference treatments for gonarthrosis is total knee arthroplasty (TKA). The main goal of postoperative physical rehabilitation is to enable the patient to recover a walking without pain, efficient and close to the “standards”. Postoperative rehabilitation techniques appear to be efficient for analytical recovery (knee flexion-extension range of motion). However, in spite of satisfying analytical recovery (range of motion, muscular strength), some patients keep a pathological walking pattern (Milner, 2009): the transfer of the analytical gains to a functional pattern such as walking is insufficient. Assuming that this disturbed walking pattern has been initiated and reinforced during the preoperative evolution of the articular pathology, one can presume that it might persist after surgery (Guingand et al., 2003). As a consequence, the Lokomat® walking aid robot could allow a “reprogramming” to a more physiological walking pattern.

**Method.** This cross-controlled, monocentric randomized study aims at comparing the effects of two types of rehabilitation sessions for patients after TKA surgery, by tridimensional motion analysis. On one hand, a 20-minute walking training session using Lokomat® and on the other hand, a 20-minute standard rehabilitation session.

Patients are included in the study between the 2nd and the 6th postoperative week and once they have recovered passive range of motion of 75° for flexion and –10° for extension of the operated knee.

**Results.** This ongoing study notices no extra benefits for the Lokomat® session. The inability to conduct the Lokomat® session at a speed close to the inner speed of the patients (uncomfortable device) might partly explain these results.

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