

tibia fracture and 22 of a distal femur fracture. Median age was 81 years (68–96 years). Reposition and stability were scored using post-operative radiographs. Function was determined by Oxford Knee Score (OKS).

Results: Mean follow-up was 11 months (1–39 months). Four patients died of reasons which are independent of the osteosynthesis. One patient developed a deep infection requiring hardware removal. One patient developed a superficial wound infection. Hardware was removed in 3 patients because of persisting soft tissue irritation. Nineteen patients could be reached for filling out the OKS at a mean postoperative period of 17 months (2–31 months). The mean score of the OKS was 34 (16–54). In 4 patients malreduction was seen without clinical consequences. LISS provided stability in all patients, except for 2.

Conclusion: In the elderly, LISS provides an acceptable complication rate in stabilizing peri-articular fractures of the knee. LISS provides good stability. Postoperative pain and function are acceptable as well.

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The influence on peroneal reaction time after five days of ankle taping

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Objectives: To study the influence of ankle taping on proprioception and active mechanism of joint protection by indirectly measuring of the proprioception.

Methods: The sample was constituted by 32 healthy subjects randomly assigned to either an experimental group (n=17) or a control group (n=15). Subjects had a mean age of 19 years (min=17-max=24), a mean height of 1,67 m (min=1,48-mix=1,80) and a mean weight of 62,5 kg (min=47,5-max=80,5). The experimental group subjects wore an ankle tape for 5 days. No intervention was done on the control group. Several measurements of the peroneal reaction time (PRT) were done before tape immobilization and after removing it. Measurements were done with a trapdoor and surface EMG. The PRT was calculated with a specific computer algorithm.

Results: The wearing of ankle tape during five days did not influence the peroneal reaction time (p>0,05).

Conclusions: It seems the ankle tape does not influence the active mechanism of joint protection of healthy subjects, however the decision to administer it should be thoughtful.

P22-349

Hydroxyapatite as a bone graft substitute in AO type B3 lateral tibial plateau fractures

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Following elevation of all articular fractures, filling of the resultant metaphyseal defect is necessary for maintenance of reduction in tibial plateau fractures. Cancellous bone graft has generally been used to fill these metaphyseal defects, but other bone substitutes have been introduced. The purpose of this study was to examine the relative efficacy of hydroxyapatite(HA) and cancellous bone graft(CB) as graft material for bone defects in lateral tibial plateau fractures.

Between 1990 and 2005 fifty tibial plateau fractures were treated surgically. Among these fifty cases, there were 29 split compression fractures (AO Type B3) in lateral tibial plateau. Twenty cases (12 male, 8 female, average age: 53.4) were filled with HA and 9 cases (2 male, 7 female, average age:57.3) were with CB for bone defect. Roentgenographic and functional assessments were evaluated at follow-up periods averaging 14 months in HA group and 23 months in CB group.

Roentgenography at final follow-up showed 1–2mm depression in 7 patients of HA group and 2mm depression in one patient of CB group. Functional assessments (Hohl's Rating System) showed 13 excellent and 7 good in HA group. However, 5 cases were excellent and 4 cases were good in CB group. The result of HA group was slightly better than CB group.

Our findings suggest that hydroxyapatite is an effective alternative to cancellous bone for the filling of bone defects associated with tibial plateau fractures.

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Anterior chronic pain of the ankle joint: Role of arthroscopic debridement and osteophyctectomy

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Introduction: Anterior ankle impingement syndrome is one of the main causes of chronic ankle pain. It consists of pain in the anterior aspect of the ankle related to dorsiflexion. The main causes of impingement lesions are posttraumatic injuries, mainly ankle sprains, leading to chronic pain. When conservative modalities fail, surgical intervention is indicated. According to the literature, Arthroscopic debridement and excision of osteophytes is the treatment of choice

Material and Methods: A retrospective review was made of 14 patients (7men/7 women) with painful limited dorsiflexion of the ankle not responding to non-operative treatment. The mean age of the sample was 48.3 y/o. An arthroscopic debridement with osteophytes resection was performed. Postoperative, patients followed an intensive rehabilitation program.

The aetiology of the impingement (fibrous vs. bony), improvement in the range of motion, pain relief, complications and posttraumatic arthritis evolution were measured.

Results: In 64% of patients impingement was due to an acute traumatic event. In 36% of the patients impingement was due to minimum repetitive injury.

The preoperative ROM was 12° DF, 23° PF. Postoperative, patients showed a mean of 17° DF and 30° PF. 8/14 patients had a bony impingement syndrome whereas 6/14 had a fibrous impingement syndrome. The preoperative pain according to a visual scale was 5.8/10. Postoperative, pain improved to 3.2/10.

Persistent disabling pain was observed in 2 patients, one of them requiring ankle arthrodesis. 1 patient experienced an infection of arthroscopic portals. 12/14 patients showed an evolutive radiologic osteoarthritis. Only 4 of them showed clinical evolution of osteoarthritis.

Conclusions: Arthroscopic debridement and osteophyte excision is a less aggressive surgical treatment for those patients having an anterior ankle impingement syndrome. Improvement in the range of motion is slight. Nevertheless, a worthwhile pain perception reduction is achieved and is maintained a year after surgery

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Stress fracture of medial malleolus

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Introduction: Stress fracture of medial malleolus is rare and occurs most often in athletes, runners and basket ball players. It appears in high-risk sports where running and jumping is frequent. The pathogenesis is multifactorial. Repetitive submaximal stress-loading of medial malleolus is always involved, but the onset of the symptoms is also affected by intrinsic factors, such as hormonal imbalances, and biomechanical factors such as talus with broader neck or abnormal pronation.

Diagnosis: The diagnosis is difficult. The main clinical symptom is localized pain on the medial side of the malleolus, Plain films do not always visualize the fracture and the use of MRI is often needed for early detection of fractures. Missed diagnosis can lead to dislocated fracture.

The present study: We wanted to study retrospective the patients treated from 1994 to 2007 at Hospital Mehiläinen, Turku. There were altogether 11 patients, all competitive high level track and field athletes or runners. There were 4 females and 7 males, the mean age was 20 years. The diagnosis was verified with MRI. Of the patients, 7 were treated operatively and 4 conservatively.

Conservative treatment included avoiding painful stresses on ankle for three months; patients had to quit jumping and running but were allowed pain free activities and training. If the symptoms did not withdraw in three months or if there were cortical fissure in MRI, an operation was performed with two parallel AO cancellous compression screws. The screws were removed after 12 months. After the operation partial weight bearing and immediate mobilization of the ankle was allowed according to pain. After 4 - 6 weeks patients were allowed water running, bicycling and gym training. Running was allowed after 8 to 12 weeks and competitive activities 4 to 5 months after the operation.

Results: The result for all patients was good in 10 patients, they returned to previous sporting level after 4 to 5 months postoperatively. One patient was operated 18 months after the onset of the symptoms when an acute-on-chronic dislocated fracture occurred. The fracture healed well in 3 months. Arthrofi-