Arthroscopic meniscectomy as a method of treating meniscus injuries

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Introduction
The knee, being the largest joint in the human’s body, is frequently exposed to injuries, during everyday or sport activities. Very often, in these type of injuries, the meniscus is damaged. Its role in the complicated biomechanics of the knee joint is multiple: transferring weight from femur to tibia, a significant role in maintaining the knee’s stability, gliding of the joint parts, as well as lubricating the joint and protecting the joint’s cartilage. Arthroscopy allows a direct three-dimension visualization and dynamic evaluation of all joint parts, as well as therapy of injuries and illnesses of the knee. Meniscectomy is one of the most frequent operations in orthopedics. With development of arthroscopic surgery, the approach to treatment of meniscus injuries is very much changed whereas the improvement of arthroscopic technique has allowed meniscectomy to be performed with local anesthesia.

Methods
In the period from January 2000 up to December 2003, at The Clinic For Orthopedic Surgery And Traumatology in Novi Sad, 420 arthroscopic meniscectomies have been performed. Of that number 374 patients have been controlled. The lesion of medial meniscus was found on 289 patients (77,3%), of the later on 67 (17,9%) and of the both on 18 (4,8%). Depending on the type of lesion, a longitudinal rupture, with or without incarceration, is dominant. Based on sport activities, patients are divided into non-athletes (119), recreationists (186) and professional athletes (69) who compete on national level.

Results
Evaluation of the results was based on the point scale, presented by Lyscholm and Gillquist (excellent result is over 90 points). On 202 patients that underwent the partial meniscectomy, the cruciate ligaments were intact, while 170 patients were diagnosed with lesion of anterior cruciate ligament and 2 patients with lesion of posterior cruciate ligament. Average Lyscholm score was 91.53. Statistically significant difference was obtained by comparison of the total score of non-athletes (87.83) and athletes (95.85). Also, there is a statistically significant difference between the group which had degenerative changes of the knee cartilage (86.97) and the group which did not have those changes at the time of the operation (94.2). There is a statistically significant difference between the group with intact LCA (92.76) and the group with ruptured LCA (88.4286). Return to work was possible in average time of 34 dana (7-180) after the operation. Professional athletes began training after 17 days (12 to 60) and competing after 30 days (20-90) average.

Discussion/Conclusion
Meniscus injuries, in 80% of cases, are diagnosed based on accurate anamnensis information and good cynical checkup. Diagnostically speaking, arthroscopy allows a direct three-dimensional visualization of all parts of the knee, dynamic evaluation, accurate diagnosis and classification of the knee meniscus injuries. At the same time, it allows a precise extraction of the damaged part of the meniscus, especially its cornu posterior. Arthroscopic meniscectomies were performed in local anesthesia with analgesedation without any complications related to anesthesia. Early results of arthroscopic meniscectomies on our material, show that the result is better on patients which have intact LCA. Meniscectomy increases the symptoms of LCA deficiency. The advantages of arthroscopic meniscectomies are primarily reflected in shortening of the rehabilitation period and sooner return to everyday activities. We detected that the postoperative rehabilitation period and the return to work very much depended on the type of work our patients performed. The return of athletes to their training and competitions was quicker than that of other population, after partial meniscectomy in the avascular zone of the meniscus. The postoperative results are mainly influenced by sport activity (in terms of better results of athletes), presence of degenerative knee changes, as well as simultaneous injury of anterior cruciate ligament (negative influence on a postoperative result). After partial meniscectomy, degenerative changes of the knee, as well as mediolateral instability are more frequent, when there is a presence of the varus-valgus deformity of the knee. The advantages of arthroscopic surgery of the knee are in dramatically shorter period of hospitalization and period necessary for complete recovery and return to everyday work and/or sport activities. This lessens, to a great extent, the medical expenses, although there still is a small risk of complications.

References