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Background: Reduced knee extensor muscle strength and associated impaired functional capacity is a common clinical finding in people with knee osteoarthritis. Furthermore, knee extensor muscle strength is a strong predictor of functional capacity one year after total knee arthroplasty (TKA). The present study aimed at investigating the effect of 4 weeks preoperative and 4-week postoperative progressive resistance training (PRT) on functional capacity, muscle strength and patient-reported outcomes compared to 4 weeks of postoperative PRT alone in patients undergoing total knee arthroplasty. **Material and Methods:** A single-blind, randomized, controlled trial including 59 patients were performed. Participants were randomized to 4 weeks of preoperative PRT (intervention group) or to a group who “lived as usual” (control group). All patients performed 4 weeks of PRT after TKA. The outcome measures were collected at baseline, 1 week before surgery, 1 week, 6 weeks and 12 weeks after TKA including measures of functional capacity, knee extensor and flexor muscle strength and patient-reported questionnaires. **Results:** A significant group difference was found in favor of the PRT group for the 30 s chair stand test (2.5 rep. (0.9;4.1) vs. -1.1 rep. (-2.8;0.7), $p < 0.004$), the timed-up-and-go test (-0.7 sec (-1.6;0.1) vs. 0.8 sec (-0.1;1.7), $p = 0.015$), the knee extensor muscle strength (-15.2 Nm (-24.4;-6.0) vs. -38.0 Nm (-48.3;-27.7), $p = 0.001$) and the knee flexor muscle strength (8.7 Nm (-3.6;21.0) vs. -12.1 Nm (-26.2;1.9), $p = 0.029$) when evaluated 6 weeks after TKA. No differences were found between groups on patient-reported outcomes. **Conclusion:** PRT is an effective intervention improving postoperative functional capacity and muscle strength but not patient-reported outcomes, without worsening pain or increasing medication in patients undergoing TKA.

TA035

Pre/Postsurgical Rehabilitation of Joint Replacement at Home

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Introduction/Background: It was previously shown that the rehabilitation program started before elective joint replacement operation can be effective tool in improving range of motion and patient’s ambulation after surgery. It is still unclear if such program, organized in outpatient rehabilitation setting, can improve patient’s independence level and walking ability at home. **Material and Methods:** 29 patients aged 72 ± 10 years were included before elective joint replacement surgery (19-Total Knee Replacement and 10 Total Hip Replacement). 4-2 weeks before the surgery they were invited to the professional meeting, included an orthopedic surgeon’s explanations about the operation and the rehabilitation program. Group session by physiotherapist was also organized with giving the precise instructions list for self-home training. Shortly after the surgery individual rehabilitation program was build by home rehabilitation unit staff. Length of stay in the orthopedic ward was 5.7 ± 2.0 says and the program was started at home in 2.0 ± 1.5 days. The program lasted 32.7 ± 8.2 days and included physiotherapy as needed (11.4 ± 3.8 sessions), 1-2 visits of nurse and occupational therapist and in some cases, of rehabilitation doctor and social worker. According to the needs some help in basic living (28.5 ± 19.9 hours) was provided. The functional independence level was measured by Functional Independence Measure (FIM) and walking ability - by Time Up And Go Test (TUAG) before and after the program. The level of patient’s satisfaction was measured by simple questionnaire from 1(not satisfied at all) to 10 (completely satisfied). **Results:** The functional independence level showed some tendency of improvement from FIM 103.0 ± 5.3 to 117.7 ± 5.5 . TUAG test dropped significantly from 54.4 ± 19.1 to 28.7 ± 14.0 . The patients’ satisfaction level was very high - 8.8 ± 2.0 . **Conclusion:** The pre/post-surgical home rehabilitation program in outpatient setting

can be effective in improvement of patient’s independence level and walking ability after joint replacement surgery.

A.2.4 LOCAL AND REGIONAL PAIN SYNDROMES

TA036

Relationship between the Ratio of the Cervical Muscles and Non-Specific Neck Pain in the School Community

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Introduction: Neck disorders appear more often associated with pain and muscle fatigue, both in young individuals and in individuals of middle age. Sustained muscle contraction needed to maintain the head in several positions and fatigue caused by muscle weakness are some of the factors for the arising of neck pain. **Objectives:** (1) Determine the prevalence of non-specific neck pain in the different agents of the school community and (2) evaluate the relationship between non-specific neck pain and flexors/extensors ratio of the cervical spine. **Methods:** This study is divided into two sections/phases. **Phase 1:** The evaluation of non-specific neck pain was conducted through a questionnaire in a sample of 285 individuals. **Phase 2:** Participants of phase 1 were subjected to inclusion and exclusion criteria for the realization of maximal isometric strength tests. Formed two groups, one consisting of individuals with non-specific neck pain ($n = 19$) and the other consisting of healthy subjects ($n = 18$). Dynamometer was used to quantify the maximal isometric strength of the cervical flexors and extensors. Subsequently, the average ratio of flexors/extensors cervical each group was calculated. **Results:** The prevalence of non-specific neck pain in this school community was 42.8%, of which 20 individuals (16.4%) are male and 102 patients (83.6%) were female. It was found that 77.9% of individuals with non-specific neck pain were students, being these the agents of the school community with the highest prevalence of pain, followed by teachers (13.9%), later by administrative (7.4%) and finally by assistants (0.8%). It has been found that there are significant differences in the maximum isometric strength of the cervical flexors, it was visible that the group of non-specific neck pain has lower muscular strength that the group of healthy individuals, 98.4 N and 112.8 N, respectively ($p = 0.029$). As for the maximum strength of the extensor and the flexors/extensors ratio no significant differences between groups was found. **Conclusion:** The agents of the school community with the highest prevalence of non-specific neck pain are the students. There is a decrease in maximal isometric strength of the cervical flexors in the group of non-specific neck pain.

TA037

The Sonographic Evaluation of Plantar Fasciitis

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Backgrounds and Objectives: There is currently no objective reliable diagnostic test for plantar fasciitis (inflammation of plantar fascia) in as much as diagnosis cannot be made on the basis of finding a heel spur on radiography (x-ray). Ultrasound is an excellent tool for evaluating common ankle problems. The aim of this study was to investigate the sonographic features of Plantar Fasciitis (PF). **Material and Methods:** This prospective study was conducted on 36 patients with heel pain and the physical characteristics of PF. In addition, 36 asymptomatic matched volunteers were recruited as a control group and were examined to provide a baseline as to the normal appearance of the plantar fascia. Sonographic examinations were performed with a commercially available scanner. The heel fat pad thickness was also measured. **Results:** The significant increase was observed in plantar fascia thickness, heel fat pad thickness, Heel pain, Morning Pain, Daily