Abstracts

99 TYPE III AND V AC JOINT DISLOCATION SHOW NO DIFFERENCE IN FUNCTIONAL OUTCOME AND RISK OF SURGERY AT 1-YEAR FOLLOW-UP

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Introduction Acromioclavicular(AC) joint dislocations are common injuries, but the need for surgery is debated. The objective of the study was to evaluate the result after acute Rockwood type III and V AC joint dislocations managed non-surgically with the option of delayed surgical intervention.

Materials and Methods This was a prospective cohort study with clinical, radiological and patient-reported outcome assessment at baseline and 6w, 3m, 6m and 1y after acute AC joint dislocation. Inclusion criteria were patients aged 18–60 with acute AC joint dislocation and >50% superior displacement of the clavicle. All patients were treated non-surgically with 3 months of home-based training and with the option of delayed surgical intervention. At baseline, patients were graded as Rockwood type III or V based on the coracoclavicular difference. The primary outcome was the Western Ontario Shoulder Instability Index (WOSI). Secondary outcome was surgery yes/no.

Results Ninety-five patients, male:female ratio 9.6:1, mean age 39.5 (range 18–59), were included. 57 patients were Rockwood type III and 38 patients were type V. There were no statistically significant differences in WOSI between patients with type III and V injuries at any time-point. Nine patients (9.5%) were referred for surgery at an average of 189 days after the injury; 7 type III and 2 type V (p=0.31). Patients eventually referred for surgery had significantly worse WOSI at 6w, 3m and 6m.

Conclusion Non-surgical management of Rockwood type III and V injuries shows similar and overall satisfactory results with 91% recovering well without the need of surgery.

101 ASSOCIATION BETWEEN HIP MUSCLE FUNCTION AND HIP-SPECIFIC PATIENT-REPORTED OUTCOMES IN PATIENTS WITH LONGSTANDING HIP AND GROIN PAIN

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Introduction Decreased hip muscle strength and poor patient-reported outcomes are common in patient with longstanding hip and groin pain. However, the association between hip muscle strength and patient-reported outcomes is less known. The aim the study was to investigate the association between hip muscle strength and hip-specific patient-reported outcomes in patients with longstanding hip and groin pain.

Materials and Methods Seventy-two patients were recruited from an orthopaedic department. Isometric hip muscle strength was measured with a handheld dynamometer in adduction and extension. Patient reported outcomes was measured with Hip and Groin Outcome Score (HAGOS). Linear regression examined the association between hip muscle strength and each HAGOS subscale. The regression models were adjusted for sex, age, BMI, and activity level.

Results Greater isometric hip muscle strength in adduction was associated with better HAGOS score in the subscales; pain, and activity in daily life (B=12.4–12.5, p=0.037) but not for the subscales; symptoms, physical function in sports, participation, and quality of life (QOL) (B=-0.5–9.7, p=0.154). Greater isometric hip muscle strength in extension was associated with better HAGOS score for the subscales; symptoms, pain, and activity in daily life (B=7.2–12.3, p≤0.034), but not for the subscales; physical function in sports, participation, or QOL (B=5.2–6.6, p≥0.084).

Conclusion Greater isometric hip muscle strength seems to be associated with better pain-reported symptoms, pain, and physical activity in daily life. The result of this study highlights the importance of considering hip strength in the rehabilitation of patients with longstanding hip and groin pain.

105 LOOP TAPING FOR HEEL FAT PAD SYNDROME: A RANDOMIZED CONTROLLED CROSSOVER CLINICAL TRIAL

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Introduction Heel fat pad syndrome (HFPS) is the second leading cause of plantar heel pain. Clinical practice guidelines recommend conservative treatments for HFPS (activity modification, arch taping, and viscoelastic heel-cups). Alarming, the evidence for managing HFPS is scant and no well-executed randomised trials exist to support specific treatments. We aim to examine the effect of a novel heel fat pad loop taping on pain and function for HFPS.

Materials and Methods In this two-arm crossover, participant-blinded RCT, participants with HFPS are block-randomized into either AB or BA interventions (A=loop taping that mimics the loop taping without any force/pressure or attempt to bunch/centralize the fat pad) with a 4-to-7-day between-intervention washout period. The primary outcome is pain during the most pain-aggravating activity selected by participants (30-sec single-leg standing or 20-meter barefoot walking). Secondary outcomes are worst pain in the past 24 hours, foot health/function using the Foot Health Status Questionnaire, and global rating of change. We also assessed mechanistic outcomes of ultrasound-measured heel fat pad thickness and pressure-algometer-measured pressure pain thresholds.

Results This pre-registered RCT will be completed in December 2022. 19 participants are needed to detect a 2-point greater pain reduction for loop vs. control taping. We have eligibility-screened 17 participants, enrolled and completed data collection in 2.

Conclusion Findings of this first RCT examining clinical and mechanistic effects of loop taping will provide much-needed
evidence on effective non-pharmacological management of HFPS.

A DECADE AFTER THE DELAWARE-OSLO ACL TREATMENT ALGORITHM: WHAT ARE THE LONG-TERM OUTCOMES?

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Introduction The Delaware-Oslo ACL treatment algorithm is distinct as it includes progressive rehabilitation with repeated functional testing, patient education, and shared decision-making about treatment. We described and compared 10-year knee osteoarthritis and patient-reported outcomes in athletes who followed our treatment algorithm and chose early (<6 months) anterior cruciate ligament reconstruction (ACLR) with pre- and postoperative rehabilitation, delayed (>6 months) ACLR with pre- and postoperative rehabilitation, and progressive rehabilitation alone.

Materials and Methods We included 276 athletes with unilateral ACL injury from a prospective cohort. Tibiofemoral radiographs, the International Knee Documentation Committee (IKDC) and the Knee injury and Osteoarthritis Outcome Score (KOOS) subscales were assessed. Radiographic osteoarthritis was defined as Kellgren and Lawrence (K&L) grade ≥2 and symptomatic osteoarthritis as KOOS pain score ≥72 and K&L grade ≥2.

Results At 10 years, 138 athletes had interpretable radiographs, whereof 59% had chosen early ACLR, 14% delayed ACLR, and 27% progressive rehabilitation alone. Across treatment groups, 12% had radiographic osteoarthritis and 1% had symptomatic OA. The mean±SD IKDC score was 87±11 points, while the KOOS subscales ranged between 76±20 (quality of life) and 98±4 (activities of daily living) points. The KOOS sport and recreation score was 87±11 points, while the KOOS subscales ranged from 80 (activity limitation) to 100 (no limitation).

Conclusion Patients with ACL injuries who followed our treatment algorithm had low rates of knee osteoarthritis and good patient-reported outcomes at 10 years. Our findings reflect outcomes after treatment as it occurs in clinical practice.

LOWER LIMB ATROPHY AND FATTY INFILTRATION AFTER ACHILLES TENDON Rupture ASSESSED BY COMPUTER TOMOGRAPHY

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Introduction In the aftermath of Achilles tendon rupture (ATR) a period of immobilization is always needed. For ATR, the immobilization period is normally 6–8 weeks which can cause significant leg muscle deconditioning and muscle weakness. Descriptive studies of limb deconditioning in the early stages after ATR injury are lacking and could yield new insights on how to best limit deconditioning after injury.

Material and Methods 15 patients with unilateral non-operated ATR were included from a randomised controlled trial. At 6 weeks after injury, all patients underwent computer tomography investigation from mid-thigh to plantar foot. Muscle CSA and attenuation were measured and associated with both patient-reported- and functional outcome one year after injury.

Results The soleus muscle of the injured limb contained at mean 19.5% more intramuscular fat than the uninjured limb at 6 weeks after injury (p<0.05). The lateral and medial gastrocnemius contained at mean 8.3% and 14.8% more fat than the uninjured limb respectively (p>0.05). Mean CSA of the uninjured lateral, medial gastrocnemius and soleus were 11.4%, 8.4% and 6.7% larger than the injured limb (p>0.05). No association between CSA or fatty infiltration and patient outcome were observed. There was no association between patient weightbearing during immobilization and muscle deconditioning.

Conclusion Muscle deconditioning occur early after ATR. Significant fatty infiltration in the muscle had occurred, with no significant difference in muscle CSA. However, no significant association to patient outcome were observed at one year, which might be due to the low number of patients in this study.

SUPERIOR OUTCOMES AFTER PROGRESSIVE PRE- AND POSTOPERATIVE REHABILITATION COMPARED WITH USUAL CARE 10 YEARS AFTER ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION

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Introduction Better two-year outcomes are achieved when anterior cruciate ligament reconstruction (ACLR) is combined with progressive preoperative and postoperative rehabilitation than with usual care, but long-term outcomes are not investigated. We therefore compared patient-reported outcomes 10 years after ACLR in patients who followed progressive preoperative and postoperative rehabilitation versus those who followed usual care.

Materials and Methods We included patients from the Norwegian arm of the Delaware-Oslo ACL cohort (progressive preoperative and postoperative rehabilitation, n=101) and the Norwegian Knee Ligament Registry (usual care, n=3162). Patients had primary unilateral ACLR using a patellar tendon or hamstring autograft after 2006, no substantial concomitant injuries, and were aged 13–40 years. The 10-year Knee Injury and Osteoarthritis Outcome Score (KOOS) subscale scores and proportion exceeding the patient-acceptable