baseline. Patients were followed for 12 months and assessed for the presence of mechanical symptoms at 3, 6 and 12 months.

Results In total, 63/121 patients reported mechanical symptoms at baseline (surgery, n=33 and exercise, n=30), while 9/26 in the surgery group and 20/29 in the exercise group reported mechanical symptoms at 12-month (missing data on 8 patients). During follow-up 8 patients crossed over from the exercise group to use the opportunity for later surgery.

At 12-month the risk difference was 34.4% (95% CI 9.5–59.2) and the relative risk was 1.99 (95%CI, 1.11–3.57) in favour of the surgery group. Similarly, a larger proportion of patients in the exercise group reported mechanical symptoms at 3 and 6 months.

Conclusion Our results suggest that meniscal surgery may be superior in alleviating mechanical symptoms compared with exercise therapy and patient education with the option of later surgery in young patients with meniscal tears and self-reported mechanical symptoms.

### Abstracts

#### 141 TERMINOLOGY AND DIAGNOSTIC CRITERIA USED IN CLINICAL STUDIES INVESTIGATING SUBACROMIAL IMPINGEMENT SYNDROME: A SCOPING REVIEW

1Adam Witten*, 1Karen Mikkelsen, 1Thomas Mayntzhusen, 1, 2Mikkel Clausen, 1Kristian Thorborg, 1Per Holmich, 1Kristoffer Barfod, 1Sports Orthopedic Research Center – Copenhagen, Department of Orthopedic Surgery, Copenhagen University Hospital Hvidovre, Denmark; 2Department of Midklinikken, Physiotherapy, Occupational Therapy and Psychomotor Therapy, Faculty of Health, University College Copenhagen, Denmark

10.1136/bmjsem-2022-sportskongres.26

**Introduction** Lack of consensus regarding terminology and diagnostic criteria used to describe and identify patients with subacromial impingement syndrome (SIS) could be an important driver of misconceptions and misinterpretations of scientific results in this population. We aim to map the literature regarding terminology and diagnostic criteria used in clinical studies investigating SIS.

**Materials and Methods** PubMed, Embase, CINAHL and SPORTDiscus were searched from inception to June 2020 using known terms for SIS. Peer-reviewed clinical studies investigating SIS were eligible for inclusion. Studies containing secondary analyses of a previously published study, reviews, pilot studies and studies with less than ten participants were excluded. Two reviewers independently screened titles and abstracts, three reviewers independently applied inclusion and exclusion criteria to full-text versions of the articles and one reviewer extracted data. Disagreement between the reviewers was resolved through dialogue.

**Results** 11,056 records were identified. 911 were retrieved for full-text screening. 535 were included. 20 different terms for SIS were identified. The diagnostic criteria were generally based on a cluster of pain provocative shoulder tests. 134 different diagnostic criteria were identified. 30% of the studies used a combination of clinical tests and imaging. 9% of the studies specified that they included patients with full-thickness supraspinatus tears and 46% specified that they did not.

**Conclusion** There is a worrying lack of consensus regarding terminology and diagnostic criteria for SIS. This calls for careful consideration when interpreting the results of studies investigating SIS and when comparing studies.

#### 144 GOOD RESULTS OF SURGICALLY TREATED PEDIATRIC KNEE LIGAMENT INJURIES IN DENMARK 2011–20 AT ONE-YEAR FOLLOW-UP

1Maria Østergaard Madsen*, 2Susanne Warnling, 3Martin Lind, 4Peter Fauna, 5Torsten Gronbaek Nielsen, 6Robert Bennike Herzog, 7Mathilde Lundgaard-Nielsen, 8Martin Wyman Rathcke, 9Anette Holm Kourakis, 10Michael Krosgaard. 1Section for Sports Traumatology MS1, Bispebjerg and Frederiksberg Hospital, Denmark; 2Department of Physical and Occupational Therapy, Copenhagen University Hospital Bispebjerg-Fredensborg, Denmark; 3Sector for Sports Traumatology, Aarhus University Hospital Skejby, Denmark

10.1136/bmjsem-2022-sportskongres.27

**Introduction** Prospective data on treatment outcome from selected cohorts of children with anterior cruciate ligament (ACL) injury are sparse. Since 2011 the surgical treatment of children with ACL injury in Denmark has been concentrated at two centers. The aim was to present one-year results after pediatric ACL-reconstruction in Denmark in the period 2011–20.

**Materials and Methods** Consecutive children (< 16 years old) who had an ACL-reconstruction were prospectively followed with patient reported outcome measure Pedi-IKDC, pivot shift and instrumented laxity before surgery and one year later. One-year follow-ups were performed by independent observers.

**Results** A total of 518 children had an ACL-reconstruction. Median age: 14.6 years (range 8–16) and 45% were girls. A quadrupel semitendinosus or a doubled semitendinosus-gracilis autologous tendon was used as graft in all but one child. Pedi-IKDC score was 57.0 preoperatively and 85.7 at 1-year (maximum score 92). Side-to-side difference of instrumented anterior laxity was 4.25 mm preoperatively and 1.3 mm at follow-up. Pivot-shift was preoperatively/at 1-year: no pivot: 3/22%, grade 1: 20/56%, grade 2: 74/21%, and grade 3: 3/1%. Two (0.3%) had an operatively treated deep infection, 3 (0.5%) were treated for reduced range of motion, 2 (0.3%) for a cyclops, and 4 (0.7%) had a rupture of the graft.

**Conclusion** ACL reconstruction resulted in a large increase in Pedi-IKDC score, a large decrease of instrumented laxity, and a reduction of pivot shift. Complication rate was low and 1-year re-rupture rate was 0.7%.

#### 148 MUSCLE STRENGTH TESTS IN INDIVIDUALS FOLLOWING AN ANTERIOR CRUCIATE LIGAMENT OR MENISCUS INJURY: A SYSTEMATIC REVIEW OF MEASUREMENT PROPERTIES (OPTIKNEE)

1Anouk Urhausen*, 2, 3Bjørnar Berg, 4Britt Elin Øiestad, 5, 6Jackie Whittaker, 1Adam G Culveron, 7Ewa Roos, 8Kay Crossley, 9Carsten Juhl, 10May Ama Råberg. 1Department of Sports Medicine, Norwegian School of Sport Sciences, Norway; 2Division of Orthopedic Surgery, Oslo University Hospital, Norway; 3Faculty of Medicine, Department of Interdisciplinary Health Sciences, University of Oslo, Norway; 4Department of Physiotherapy, Oslo Metropolitan University, Norway; 5Department of Physical Therapy, Faculty of Medicine, University of British Columbia, Vancouver Canada, Canada; 6Arthritis Research Canada, Canada; 7La Trobe Sport and Exercise Medicine Research Centre, School of Allied Health, Human Services and Sport, La Trobe University, Australia; 8Department of Sports Science and Clinical Biomechanics, Musculoskeletal Function and Physiotherapy, University of Southern Denmark, Denmark

10.1136/bmjsem-2022-sportskongres.28

**Introduction** There is a lack of consensus on the most relevant and clinically applicable tests to evaluate knee muscle strength.