Assessing the outcome of Osgood-Schlatter disease in male youth elite football players; a prospective cohort study

No registrations found.

Ethical review	Not applicable
Status	Recruiting
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON23554

Source
Nationaal Trial Register

Brief title
TBA

Health condition

Osgood-schlatter disease

Sponsors and support

Primary sponsor: UMC locatie AMC
Source(s) of monetary or material Support: -

Intervention

Outcome measures

Primary outcome

Self-reported improvement

Secondary outcome

Anthropometrics, KOOS-Child score, VAS pain scores, time to complete resumption of sports, strength and flexibility scores, Ehrenborg stage, and Doppler activity in patellar tendon

Study description

Background summary

The aim of this prospective cohort study is threefold: 1) to assess the outcome of OSD in male youth football players, 2) to determine possible prognostic factors for OSD outcome, and 3) to determine possible prognostic factors for time to complete resumption of sports.

Study objective

- Higher VAS pain scores, higher KOOS-Child scores, lower strength and flexibility scores, and more neovascularisation in the patellar tendon are associated with slower self-reported improvement (and longer duration of injury and therefore time-loss).
- There is a positive relation between VAS pain scores and Doppler activity in the patellar tendon.

Study design

Once diagnosed OSD, participants will be subjected to a baseline measurement. The baseline measurement will consist of anthropometrics, a baseline questionnaire, the Knee injury and Osteoarthritis Outcome Score for Children (KOOS-Child), VAS pain scores upon palpation and during pain provocation tests, flexibility and strength measurements, and ultrasonic imaging of both knees. Participants will be closely monitored during follow-up measurements each other week in order to assess the course of their injury. The follow-up measurements consist of a follow-up questionnaire, the KOOS-Child, VAS pain scores upon palpation and during pain provocation tests, flexibility and strength measurements, and ultrasonic imaging of both knees. The fortnightly follow-up will last until a player completely resumes their football activity at the club. All participants, with or without complete resumption of football activities, are subjected to the quarterly follow-up measurements at weeks 12, 24, 36, and 48. The primary outcome for this study will be the self-reported improvement, which is part of the follow-up questionnaire, after 12 weeks. Secondary outcome measures are anthropometrics, KOOS-Child score, VAS pain scores, time to complete resumption of sports, strength and flexibility scores, Ehrenborg stage, and Doppler activity.

Body weight, standing height, and sitting height will be measured each quarter. Age peak height (APHV) will be calculated. The clinical examination will be conducted by a clinician and will consist of pain provocation tests, flexibility tests, and strength tests. Both knees of athletes presenting with anterior knee pain will be palpated at five points of the tibial tuberosity (central, medial, lateral, superior, and inferior). Two additional pain provocation

tests will be executed. Firstly, passive maximum flexion of the knee in prone position to assess stretch pain at the tibial tuberosity. Secondly, pain at the tibial tuberosity on resisted isometric hip flection with both extended knee and 90° knee flection will be assessed. Pain during each pain provocation test will be quantified using a visual analogue scale (VAS) pain score. Hamstring, quadriceps, gastrocnemius, and soleus flexibility will be measured in a standardised fashion. A digital inclinometer (Baseline evaluation instruments Digital Inclinometer type 12-1057) will be used to determine the articular angles. Hamstring, quadriceps, hip abductor, and hip adductor strength will be measured in a standardised fashion. To quantify the strength, a handheld dynamometer (HHD, Biometrics MicroFET 2 wireless) will be used. For each muscle group, the best of three results will be documented. After diagnosis, both knees will be examined by means of ultrasound imaging, using a linear probe. Longitudinal views of the distal insertion of the patellar tendon will be recorded on a 90° flexed knee. The maturation stage of the tibial tuberosity will be determined using the Ehrenborg classification. Neovascularisation will be assessed using Doppler flow. The pressure of the probe will be kept to a minimum to prevent compression of small vessels. Neovascularisation will be graded using a modified version of the method that was used by Gisslén and Alfredson (2005) in order to quantify blood flow in the patellar tendon of volleyball players diagnosed with jumper's knee. This modified semi-quantitative scale looks as follows: 0, no flow; 1, one or two vessels inside the tendon; and 2, three or more vessels inside the tendon. A distinction will be made between grade 1 and 2 neovascularisation.

Contacts

Public
Vrije Universiteit Amsterdam
Vito Hattem

+31642290214
Scientific
Vrije Universiteit Amsterdam
Vito Hattem

+31642290214

Eligibility criteria

Inclusion criteria

1. Subjective pain during sports or activities of daily living
2. Confirmed by pain provocation during clinical examination:
- Pain localised at the tibial tuberosity that increases upon palpation, or

- Pain localised at the tibial tuberosity upon resisted knee extension

Exclusion criteria

Concomitant injury that impedes following the treatment program

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non controlled trial
Masking:	Open (masking not used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	04-01-2021
Enrollment:	80
Type:	Anticipated

IPD sharing statement

Plan to share IPD: No

Ethics review

Not applicable

Application type:	Not applicable

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL9190
Other	METC AMC : W20_527 # 20.584

Study results