

Sports-related Long-term outcomes of Overuse of the Wrist

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The aim of this study is to evaluate the long-term imaging and functional outcomes of overuse injuries of the wrist in (former) athletes.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Joint disorders
Study type	Observational invasive

Summary

ID

NL-OMON43027

Source

ToetsingOnline

Brief title

SLOW study

Condition

- Joint disorders

Synonym

joint degeneration, Osteoarthritis

Research involving

Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum

Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Long-term, Outcomes, Overuse, Wrist

Outcome measures

Primary outcome

Prevalence of signs of degenerative disease of the previously injured wrist joint on conventional posterior-anterior, *, and lateral radiographs, assessed using the osteoarthritis score developed by Kellgren and Lawrence.

Secondary outcome

Multiple functional outcome measures will be used. Patient-rated outcome measures include:

- Functioning of the upper extremities measured by the Dutch validated version of the Disability of the Arm, Shoulder and Hand (DASH) questionnaire;
- Functioning of the hands and wrists measured by the Dutch validated version of the Patient-Rated Wrist and Hand Evaluation (PRWHE-DLV);
- Functioning in relation to work, measured by the newly developed WORQ-UP questionnaire that is currently being validated, and by questions about work ability in relation to both wrists separately.

Other outcome measures include:

- Isometric hand grip strength of the hand on the previously injured side measured using a Jamar dynamometer compared to the non-injured side, and compared to normative population data;
- Kellgren and Lawrence osteoarthritis score on conventional radiographs of the overuse-injured wrist at follow-up, compared to the Kellgren and Lawrence osteoarthritis score of the non-injured wrist at follow-up, both assessed by a

specialized musculoskeletal radiologist and/or a musculoskeletal radiology resident;

- Abnormalities and Kellgren and Lawrence osteoarthritis score on conventional radiographs of the affected wrist compared to wrist imaging at first hospital visit, assessed by a specialized musculoskeletal radiologist and/or a musculoskeletal radiology resident;

- Demographic and anthropomorphic characteristics (e.g. age, length in centimetres, weight in kilograms) and training characteristics (e.g. starting age, level, training intensity in hours, training frequency in days, specialty elements) of participants.

- Work characteristics (e.g. type of work, work hours, education) of participants.

Study description

Background summary

In clinical practice, overuse injuries of the wrist are frequently seen in young athletes. Possible long-term complications of overuse injuries of the wrist include degenerative conditions of the wrist such as osteoarthritis, which can present with bothersome symptoms. However, the prevalence of these long-term outcomes of overuse wrist injuries as well as the consequences on functioning in daily life, sports and work, have not been investigated systematically. The growing number of young athletes at risk for overuse injuries of the wrist, and with many prospective years of active participation in the employment market, has raised awareness of the essential need for evaluation of the long-term consequences of these injuries. More insight in the functional consequences on (former) athletes* daily life, work and sports can be valuable for the improvement of treatment, return-to-play counseling, and targeted secondary prevention strategies.

Study objective

The aim of this study is to evaluate the long-term imaging and functional outcomes of overuse injuries of the wrist in (former) athletes.

Study design

Cohort study taking place in one specialized centre.

Study burden and risks

If patients agree to participate, they will be invited for a one-time visit to the AMC. During this visit, they will be asked to fill out a questionnaire containing functional outcome measures such as the Disability of the Hand, Shoulder and Wrist (DASH) questionnaire and the Patient-Rated Wrist and Hand Evaluation (PRWHE). Subsequently, hand grip strength of both hands will be assessed using a Jamar dynamometer in three separate measurements per hand. Lastly, conventional radiographs of both wrists will be made, with a total radiation burden of 0.006 mSv. There are no AEs, SAEs or SUSARs expected since the radiation dose is minimal and no intervention is applied. Moreover, no additional benefit or harm is expected in the course of this study that could lead to premature termination of the study.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

- Any diagnosis of overuse injury of the wrist, defined as a stress fracture or other stress reaction or soft tissue irritation, with no history of trauma, based on clinical assessment and/or imaging;
- No history of overuse injury of the contralateral wrist, according to same criteria as above, based on patient history and patient records;
- Active participation in a wrist-loading focus sport (gymnastics, tennis, judo, field hockey, volleyball, and rowing) or other sport that requires repetitive loading of the wrist at time of diagnosis of overuse wrist injury;
- Age \geq 25 years at moment of diagnosis of overuse injury of the wrist;
- No history of trauma or overuse injury of the contralateral wrist;
- No surgical treatment of the overuse injury of the wrist;
- No neurovascular disorders (e.g. Raynaud syndrome) or systemic diseases (e.g. diabetes mellitus, rheumatoid arthritis) affecting the musculoskeletal system;
- No other trauma of the wrist after the diagnosed overuse injury of the wrist that now predominantly causes symptoms and/or limitations of the upper extremity;
- No other conditions that cause symptoms or limitations of the upper extremity;
- Not pregnant.

Exclusion criteria

See inclusion criteria

Study design

Design

Study type: Observational invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Basic science

Recruitment

NL
Recruitment status: Recruitment stopped
Start date (anticipated): 29-11-2016
Enrollment: 100
Type: Actual

Ethics review

Approved WMO
Date: 06-10-2016
Application type: First submission
Review commission: METC Amsterdam UMC
Approved WMO
Date: 12-04-2017
Application type: Amendment
Review commission: METC Amsterdam UMC

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
CCMO	NL59098.018.16

Study results

Date completed: 11-12-2018

Actual enrolment: 5

Summary results

Trial ended prematurely