Prevalence of vascular pathology associated with self-reported symptoms of digital ischemia in (a)symptomatic elite male volleyball players in the Netherlands

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1a) To determine the prevalence of digital pathology, possibly as a result of digital emboli, in the dominant hand in symptomatic and asymptomatic elite Dutch male volleyball players. 1b) To determine the association between the presence of digital...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Aneurysms and artery dissections
Study type	Observational non invasive

Summary

ID

NL-OMON37489

Source
ToetsingOnline

Brief title
Prevalence of vascular pathology in elite male volleyball players

Condition

- Aneurysms and artery dissections

Synonym
arterial disease of the shoulder, PCHA aneurysm

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: digitial ischemia, PCHA pathology, Volleyball

Outcome measures

Primary outcome

Pulse volume recordings (triphasic/normal and non-triphasic/abnormal) of the

fingers in the dominant and non-dominant hand using photoplethysmography

Secondary outcome

* Peak systolic velocity (PSV) and luminal diameter and vessel characteristics,

such as a sign of aneurysm, stenosis, occlusion, thrombus or dissection of the

PCHA in the dominant shoulder using Color Doppler ultrasound

* Prevalence and association of digital pathology and PCHA anomalies in

symptomatic and asymptomatic elite Dutch male volleyball players.

Study description

Background summary

The prevalence of cold, blue and pale digits in the dominant hand during or immediately after practice or competition ranged between 11% and 27% in elite male volleyball players in the Netherlands. These symptoms are associated with digital ischemia that can be caused by emboli due to pathological changes of the posterior circumflex humeral artery (PCHA). However, whether the surveyed symptoms are indeed associated with digital and PCHA pathology (PCHAP) has yet to be revealed. Since these symptoms can also be explained by a wide variety of other vascular pathologies.

Study objective

1a) To determine the prevalence of digital pathology, possibly as a result of digital emboli, in the dominant hand in symptomatic and asymptomatic elite Dutch male volleyball players.
1b) To determine the association between the presence of digital pathology in the dominant hand with the presence or absence of symptoms of cold, blue and pale digits in the dominant hand during or immediately after practice or competition in symptomatic and asymptomatic elite Dutch male volleyball players.
2a) To determine the prevalence of anomalies of the PCHA in the dominant shoulder in symptomatic and asymptomatic elite Dutch male volleyball players.
2b) To determine the association between anomalies of the PCHA in the dominant shoulder with the presence or absence of symptoms of cold, blue and pale digits in the dominant hand during or immediately after practice or competition in symptomatic and asymptomatic elite Dutch male volleyball players.

Study design

Case-control study (with the cases being symptomatic and the controls being asymptomatic volleyball players)

Study burden and risks

There are no apparent risks for the participant being assessed by the standard diagnostic procedures. The possible benefit for a participant is that, if an abnormality is found, further analysis of the presence of digital pathology and PCHA anomalies can be performed and possible irreversible damage might be prevented.

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

Players with symptoms associated with PCHA pathology with digital emboli:
* Male volleyball players active in the Dutch national top league in the seasons 2010-2011 and/or 2011-2012.
* Players who report to *sometimes or more often suffer from cold or blue or pale digits in the dominant hand during or directly after practice or competition*.
* Written informed consent.;Players without symptoms of associated with PCHA pathology with digital emboli:
* Male volleyball players active in the Dutch national top league in the seasons 2010-2011 and/or 2011-2012.
* Players who do not report to *sometimes or more often suffer from cold or blue or pale digits in the dominant hand during or directly after practice or competition*.
* Written informed consent.

Exclusion criteria

* A history of surgery to the dominant shoulder.
* Age <18 years
* Lack of written informed consent.

Study design

Design

Study type: Observational non invasive

Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	10-07-2012
Enrollment:	60
Type:	Actual

Ethics review

Approved WMO

Date:	28-06-2012
Application type:	First submission
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	NL40280.018.12