Maximal Voluntary Conctraction (MVC) of the m. quadriceps femoris in patients with moderate to very severe COPD.

Published: 23-12-2008
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What is the clinical course of m. quadriceps muscle function in COPD?

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Respiratory disorders NEC
Study type	Observational non invasive

Summary

ID

NL-OMON31906

Source
ToetsingOnline

Brief title
Maximal Voluntary Conctraction of quadriceps muscle in patients with COPD.

Condition

- Respiratory disorders NEC

Synonym
Chronisch Ostructieve aandoeningen aan de luchtwegen, COPD

Research involving
Human

Sponsors and support

Primary sponsor: Centrum voor Integrale Revalidatie Orgaanfalen
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: COPD, Maximal Strength, MVC, Quadriceps femoris

Outcome measures

Primary outcome

Maximal Voluntary Contraction of the m. quadriceps femoris

Secondary outcome

Nvt.

Study description

Background summary

Quadriceps strength is on average reduced by 30% in patients with chronic obstructive pulmonary disease (COPD) when compared to healthy age matched individuals. This is believed to be a consequence of progressive inactivity and/or systemic inflammatory burden. Recent data demonstrates that reduced quadriceps strength gives greater prognostic information than certain variables used in previous models to predict COPD mortality.

Study objective

What is the clinical course of m. quadriceps muscle function in COPD?

Study design

This is a 1 year longitudinal study with patients with moderate to very severe COPD.

Study burden and risks

Satisfactory measurements by an experienced examiner should be obtainable within 15 minutes. There are no serious risks associated with the MVC testing procedure. Mild, transient muscle cramps or discomfort from prolonged positoning as discribed are occasionally reported.

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

COPD (GOLD II-IV)

Exclusion criteria

Patients will not have the MVC recorded if they report any known confounding musculoskeletal or neuromuscular pathology affecting the right leg. This will include:
1) Severe osteoarthritis of either the right hip or knee joint which causes pain when positioned or performing the manoeuvre;
2) Compressive spinal pathology affecting the lumbar nerve roots;
3) Polyneuropathy or mononeuropathy affecting the femoral nerve. Patients with diabetes will general NOT be considered to fall into this category;

4) Co-existent or progressive motor neuron, neuromuscular junction or primary muscle disease;
5) Previous stroke (thrombo-embolic or haemorrhagic) affecting the right side;
6) Critical peripheral vascular disease affecting proximal leg blood flow (aorto-iliac disease).

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	06-01-2009
Enrollment:	137
Type:	Actual

Ethics review

Approved WMO

Date:	23-12-2008
Application type:	First submission
Review commission:	CCMO: Centrale Commissie Mensgebonden Onderzoek (Den Haag)

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	NL22616.040.08