The spontaneous contraction pattern of the Transverse Abdominal muscle in chronic Pelvic Girdle Pain

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

Summary

ID

NL-OMON36792

Source
ToetsingOnline

Brief title
TA use in chronic PGP

Condition

- Joint disorders

Synonym
Low Back Pain / Pelvic Girdle Pain

Research involving
Human

Sponsors and support

Primary sponsor: Erasmus MC, Universitair Medisch Centrum Rotterdam
Source(s) of monetary or material Support: Ministerie van OC&W,Het onderzoek wordt in pricipe gedaan door gratis vrijwiligers; subsidie is aangevraagd

Intervention

Keyword: Back pain, coordination, pregnancy, ultrasound

Outcome measures

Primary outcome

Transversus abdominis Quotient (TAQ). TAQ is calculated by dividing the thickness of the transversus abdominis (TA) during forceful hip adduction by the thickness of the TA during Active Straight Leg Raising (ASLR) (left and right average).

In formula:

TAQ = thickness of TA during adduction / ((thickness of TA during ASLR left + thickness of TA during ASLR right) / 2)

Secondary outcome

The thickness increase of the TA (in % of the thickness at rest) at 7 low levels of hip adduction force (20-140 Newton).

Force increase at bilateral hipadduction in % after fastening a pelvic belt.

Study description

Background summary

Low back pain is common and a treatment aimed at the cause is not possible in 85% of the cases because the cause is unknown. The back pain in those 85% is described in literature as "nonspecific." In theory recovery of non-specific low back pain is delayed in a proportion of them because the contraction pattern of the transversus abdominis (TA, the innermost of the three lateral muscles in the abdominal wall) is inefficient. Identifying inefficient use of TA can be determined with needle EMG. In diagnosis and treatment a need exists for a simple method to evaluate the contraction pattern. Its importance is that for patients with an incorrect contraction pattern of a specific therapy could be developed. The results of studies in pregnant women with back pain are

encouraging. The proposed study will examine whether the findings also apply to non-pregnant women.

Study objective

Ultimate goal of this study is to improve the diagnosis and treatment of back pain in general and pregnancy-related low back pain with signs of pelvic girdle pain in particular. More specifically, in the proposed study with ultrasound of the abdominal muscles a contraction pattern of the TA will be sought with high sensitivity and specificity to discriminate between patients with a normal and an abnormal contraction pattern of the TA.

Study design

The study is a cross-sectional study. The diagnostic value of a test will be checked in women with and without pelvic girdle pain (PGP).

Study burden and risks

1. For patients it means no burden at all. The investigation has already been done.
2. For the controls no risk exists. It is a non-stressful physical examination and a non-invasive ultrasound of the abdominal wall.

Contacts

Public
Erasmus MC, Universitair Medisch Centrum Rotterdam

Vondellaan 35Ac
2332 AA Leiden
NL
Scientific
Erasmus MC, Universitair Medisch Centrum Rotterdam

Vondellaan 35Ac
2332 AA Leiden
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

1. Patients with posterior pelvic pain. The pain started during pregnancy or within 3 weeks after delivery and was ongoing since then. Last pregnancy was > 0.5 years previously. At least one positive test for PGP (ASLR and/or PPPP test).
2. Controls without pain anywhere among the pelvis and hips and knees during at least 3 months. Negative tests for PGP (ASLR and PPPP test). Last delivery was > 0.5 years previously.

Exclusion criteria

Abnormal anatomy of lumbar spine, pelvis, hips and abdominal wall (congenital or as a result of severe trauma or radical surgery). Severe neurologic or rheumatic disease. Obvious psychopathology. Inability to fill in forms without any help.

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):	01-06-2011
Enrollment:	95
Type:	Actual

Ethics review

Approved WMO Date:	19-04-2011
Application type:	First submission
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

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	NL32486.078.11