Title: Effectiveness of individualized physiotherapy on pain and functioning compared to a standard exercise protocol in patients presenting with clinical signs of subacromial impingement syndrome. A randomized controlled trial.

Authors:

Thilo O Kromer (Thilo.Kromer@epid.unimaas.nl)
Rob A de Bie (RA.deBie@epid.unimaas.nl)
Caroline HG Bastiaenen (Chg.Bastiaenen@epid.unimaas.nl)

Version: 2 Date: 18 May 2010

Author's response to reviews:

Dear Sir,

Thank you for given me the opportunity to resubmit the revised manuscript. The manuscript now conforms to the journal style, references are created with EndNote.

Below you can find the point-by-point response to the comments of the reviewer and the information about the changes made in the text. I hope the comments of the reviewer are answered satisfactory,

With kind regards

Thilo Oliver Kromer
e.mail: thilo.kromer@epid.unimaas.nl

Author's response to reviewer`s comments

Comments:
I believe that the results of any imaging studies should be obtained and analyzed to see if any findings affect the outcomes at all AND whether there are differences in outcome between pts who have had imaging studies vs those who have not.

Response:
The main research question of our RCT is to compare the effect of individualized physiotherapy to a standardized exercise protocol in patients with clinical signs of shoulder impingement and thus participants are included on a clinical basis without technical support. This decision was based on two facts: First, the study takes place in a primary care setting where most of the patients do not have any kind of diagnostic imaging and are often referred to
physiotherapy on a clinical basis.

Second, in a-specific shoulder pain patients (without red flags) it is nearly impossible to identify the structure at fault neither with diagnostic clinical tests nor with the help of diagnostic imaging due to their low diagnostic accuracy. Besides this only a poor correlation exists between imaging and symptoms. Due to this are imaging studies not recommended as a diagnostic tool in guidelines for the assessment and treatment of a-specific shoulder patients, similar to the guidelines for a-specific LBP-patients.

Thus, results from imaging studies cannot be considered suitable to build any treatment decisions upon.

Treatment decisions in our trial are based on the clinical information (impairments, activity & participation restrictions) gained from the clinical examination and are guided by a decision tree and a structured re-examination process to monitor progression of treatment. All research physiotherapists involved in this study are Orthopaedic Manipulative Physical Therapists (IFOMPT-standard) and are therefore very well trained specialists in the musculoskeletal field and in the clinical examination and treatment of shoulder patients.

In summary:

# Main focus is to compare the effectiveness of two interventions for shoulder impingement patients, not to evaluate the influence of diagnostic imaging on outcome
# Basis for referral to physiotherapy in primary care is a clinical diagnosis
# Treatment in this trial is focused on restricted body functions, activity and participation restriction and not on a single structure.
# Treatment is guided by a decision tree and a structured re-examination process
# Research physiotherapists are specialists in the musculoskeletal field
# Imaging studies show a low diagnostic accuracy
# There is only a poor correlation between imaging and symptoms
# Diagnostic imaging is not recommended in guidelines for a-specific shoulder pain

In our opinion these reasons explain why we abstain from collecting and analyzing imaging studies in our RCT.

Changes made in the manuscript:

Abstract, page 2, last two lines:
Results
First results are expected in 2012, long term results in 2013.
Results
Inclusion of participants has started in April 2010. First results are expected in 2012, long term results in 2013.