

Musculoskeletal chest pain in patients with stable angina pectoris

Diagnosis and treatment

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ABSTRACT

This PhD dissertation was carried out at the Department of Clinical Physiology and Nuclear Medicine, Odense University Hospital, under my employment as a PhD student from 1998 to 2001 at the Institute of Clinical Research, Faculty of Health Sciences, University of Southern Denmark, and from 2001 to 2003 under my employment at Nordic Institute of Chiropractic and Clinical Biomechanics, Odense, Denmark.

The subject of the dissertation is diagnosis and treatment of chest pain originating from the musculoskeletal system in patients stable angina pectoris (AP), in this connection named cervico-thoracic angina (CTA). The dissertation comprises four part projects (I-IV), the aim of which was to assess the reliability of different manual palpation methods for the detection of biomechanical dysfunction in the spine and muscular tenderness in the thorax (I-II). Additionally, to examine the occurrence of CTA in AP patients and describe the diagnostic decision process based on the case history and clinical examination including manual palpation (III). Finally, to elucidate if patients with a diagnosis of CTA would benefit from manual treatment (IV).

In I and II we investigated the intra- and interobserver reliability of four palpation methods in 85 patients. In part project III, 507 patients referred for coronary angiography (CAG) were examined. Out of these, 275 gave consent to participate. Approximately two months prior to CAG, interrogation, clinical examination and myocardial perfusion imaging were carried out on a single day. In a non-randomised trial (IV) 50 patients with a diagnosis of CTA were offered manual therapy. It was possible to establish an examination program with low intraobserver variation, but high interobserver variation except for the detection paraspinal tenderness. Further, it was shown, that an experienced chiropractor could by means of the case history and a systematic manual identify a group of AP patients with CTA, in the present material 18%. As many as 80% of these had normal myocardial perfusion compared to 50% of CTA-negative patients. Finally, the treatment series suggested that patients with a chiropractic diagnosis of CTA might benefit from manual therapy (IV). In conclusion, this PhD project suggests that musculoskeletal dysfunction may be a (contributory) cause of the chest pain in patients referred for CAG because of known or suspected AP, and that manual therapy may be treatment possibility in these patients.

The clinical consequences of this project are not clear until results of long term studies and more controlled treatment trials are available.