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The effects of topical heat therapy on chest pain in patients with acute coronary syndrome: a randomised double-blind placebo-controlled clinical trial

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Abstract

Aims and objectives: To investigate the effects of local heat therapy on chest pain in patients with acute coronary syndrome.

Background: Chest pain is a very common complaint in patients with acute coronary syndrome. It is managed both pharmacologically and nonpharmacologically. Pharmacological pain management is associated with different side effects.

Design: This was a randomised double-blind placebo-controlled clinical trial conducted in 2013.

Methods: A convenience sample of 66 patients with acute coronary syndrome was selected from a coronary care unit of a local teaching hospital affiliated to Gonabad University of Medical Sciences, Gonabad, Iran. Patients were randomly assigned to either the experimental or the placebo group. Patients in the experimental and the placebo groups received local heat therapy using a hot pack warmed to 50 and 37 °C, respectively. We assessed chest pain intensity, duration and frequency as well as the need for opioid analgesic therapy both before and after the study. The study instrument consisted of a demographic questionnaire, the McGill Pain Questionnaire, and a data sheet for documenting pain frequency and duration as well as the need for analgesic therapy.

Findings: The placebo heat therapy did not significantly decrease the intensity, the duration and the frequency of pain episodes. However, pain intensity, duration and frequency in the experimental group decreased significantly after the study. Moreover, the groups differed significantly in terms of the need for opioid analgesic therapy neither before nor after the intervention.

Conclusion: Local heat therapy is an effective intervention for preventing and relieving chest pain in patients with acute coronary syndrome.

Relevance to clinical practice: Effective pain management using local heat therapy could help nurses play an important role in providing effective care to patients with acute coronary syndrome and in minimising adverse effects associated with pain medications.

Keywords: acute coronary syndrome; chest pain; local heat therapy.

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