



**The Impact of Chest Pain and the Use of Morphine on Complications
after Acute Myocardial Infarction**

(تأثير ألم الصدر واستخدام المورفين على المضاعفات ما بعد إحتشاء عضلة القلب الحاد)

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ABSTRACT

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Background: Patients with acute myocardial infarction are usually presented to the emergency department complaining of severe chest pain. This pain results from an imbalance between oxygen supply and demand and it leads to serious complications. Different guidelines recommend the use of morphine as a drug of choice for treating this pain.

Aim: The purpose of this study was to investigate the effect of chest pain and Morphine use on complications rate after acute myocardial infarction (AMI).

Methodology: This was a prospective observational study with a consecutive sample of 300 patients with AMI. Data were collected by direct patients interview and medical records in the ED & ICU departments. Any complication developed within hospitalization after AMI was recorded. All correlated variables were analyzed using the binary logistic regression model.

Result: The sample included 176 (58.7%) men and 124 (41.3%) women with a mean age of 56.92 ± 12.13 years. A total of 83 patients (27.7%) developed one or more in-hospital complications. Acute recurrent ischemia was the most frequent complication; 70(23.3). The binary logistic regression model showed that chest pain severity, chest pain duration, previous MI, and history of HTN were independent predictors for increasing the occurrence of complications. However, the use of Morphine did not have any protective effect against the development of the complications.

Conclusion and recommendations: The major findings of the current study were: 1) Predictors for the occurrence of complications after AMI which were: severity of chest pain, duration of chest pain, history of previous MI and history of HTN. 2) Morphine administration did not have any protective effect against the development of these complications. Chest pain usually results from an imbalance between oxygen supply and demand. Thus, it is recommended that other types of chest pain relief methods e.g. treating the underlying cause of chest pain; addressing the imbalance between oxygen supply and demand, should be incorporated in the treatment protocols. Furthermore, RCT to check the effect of Morphine on complications after AMI is still recommended.

Keywords: Chest pain; Morphine; Acute Myocardial Infarction; Complications.