Symptoms and care seeking behaviour during myocardial infarction in patients with diabetes

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Akademisk avhandling

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Background: In Myocardial infarction (MI) it is well established that timely diagnosis and treatment may reduce mortality and improve the prognosis. Therefore it is important that patients with MI seek medical care as soon as possible. Patients with diabetes have a higher risk for MI and worse prognosis compared to patients without diabetes. Previous research is inconclusive regarding symptoms and pre-hospital delay times in MI among patients with diabetes and there is lack of research in how patients with diabetes perceive, interpret and respond to MI symptoms.

Aim: The overall aim of this thesis was to explore symptoms and care seeking behaviour during MI in patients with diabetes.

Methods: This thesis comprises four studies. Studies I and II were based on data from the Northern Sweden MONICA myocardial infarction registry to describe symptoms in 4028 patients (I) and pre-hospital delay and factors associated with pre-hospital delay of ≥ 2 h in 4266 patients (II). Study III included 694 patients, at five hospitals in Sweden. The patients answered a questionnaire about symptoms, response to symptoms and delay times in MI. In study IV data were collected through interviews about experiences of getting MI and the decision to seek medical care.

Results: Study I showed that typical MI symptoms according to MONICA criteria were common in both men and women, both with and without diabetes, and no differences between the groups were found. Study II showed that more patients with diabetes had pre-hospital delay times of ≥ 2 h compared to patients without diabetes. In Study III, chest pain was the most common self-reported MI symptom in patients with and without diabetes and there were no differences between the groups. Shoulder pain/discomfort, shortness of breath and tiredness were more common in patients with diabetes whereas cold sweat was less common compared to patients without diabetes. Less than 40 % of patients with diabetes called the emergency medical services (EMS) as their first medical contact (FMC) and about 60 % initially contacted a spouse after symptom onset. Patients with diabetes reported longer patient delay than patients without diabetes, but after age and gender adjustments the results were not significant. Pain, pressure or discomfort in the stomach, anxiety, symptoms that come and go and thoughts that the symptoms would disappear were associated with longer patient delay in patients with diabetes. In study IV, the analysis revealed the core category "Becoming ready to act" and the categories: perceiving symptoms, becoming aware of illness, feeling endangered, and acting on illness experience. Patients with diabetes described a variety of different MI symptoms, the onsets of MI varied and it was sometimes difficult to interpret symptoms as related to MI. The decision to seek medical care for MI was complex with several barriers for timely care seeking.

Conclusion: Chest pain was common in patients with diabetes and in contrast to our hypothesis chest pain was equally common in both patients with and without diabetes. There were more similarities than differences in MI symptoms between patients with and without diabetes. However, patients with diabetes are more likely to have pre-hospital delay for 2 hours or more compared to those without diabetes and there seems to be an underutilization of the use of emergency medical services as first medical contact. The process to seek care for MI was complex, initiated by perceiving symptoms, followed by illness awareness, feelings of being endangered and finally acting on the illness experience.

Keywords
myocardial infarction, diabetes mellitus, symptoms, symptom interpretation, pre-hospital delay, patient delay, decision making, care seeking behavior