Glycemic control in insulin and non-insulin dependent diabetic patients with ST elevation predicts time to presentation
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Background/Introduction

• The number of people diagnosed with diabetes mellitus (DM) continues to increase yearly (1).
• DM is classically associated with silent or atypical symptoms in patients presenting with ST elevation myocardial infarction (STEMI) compared to those without DM although some debate still exists (2-3).
• It is unknown if the type of treatment or the adequacy of glycemic control impacts the time to presentation and type of symptoms.
• Therefore, we sought to evaluate the impact of poor glycemic control on these outcomes as measured by Hemoglobin A1c.

Materials and Methods

• In this retrospective study, we collected and analyzed data from 766 patients who presented to a tertiary-care university medical center with STEMI from 2008-2015.
• Over that timeframe, 238 of the 766 patients (31%) who presented with STEMI had DM.
• A T-Test was performed comparing mean time to presentation in diabetics vs. non-diabetics
• T-tests and χ² tests were used to compare presenting symptoms between the two groups.
• Regression analysis was performed comparing time to presentation to Hgb A1c.

Results

• Diabetic patients presenting with STEMI on average presented 50 minutes later than non-diabetic patients (194.8 minutes vs. 144.7 minutes, p = 0.0054).
• Chest pain was the most common presenting symptom in diabetic and non-diabetic patients with similar rates in both groups (87.4% v 89.1%, p = 0.561)

Diabetic patients have longer length of hospital stay compared to non-diabetic patients.

Diabetic and non-diabetic patients presented with similar rates of chest pain.

Diabetic patients have longer length of hospital stay compared to non-diabetic patients.

Conclusion

• No statistically significant difference was found in rates of shortness of breath, syncope, or GI symptoms between the two groups.
• Non-diabetic patients had significantly lower hospital lengths of stays compared to diabetic patients (p = 0.011).
• Time to presentation increased for every unit increase in hemoglobin A1c level (p = 0.0035).

References