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**Sex differences in acute myocardial infarction: clinical characteristics,
management practices, and outcomes for patients in a large tertiary hospital
in Palestine**

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**Submitted in Partial Fulfillment of the Requirement for the Degree of
Medicine, Faculty of Medicine and Health Science, at An-Najah National
University, Nablus, and Palestine.**

July 2021

Abstract

Background

Myocardial infarction kills more men and women around the world than any other cause of mortality. Most importantly, this deadly disease claims the lives of more women than men each year. Previous research from high-income nations has consistently found gender disparities regarding the presentation, diagnosis, and therapy of myocardial infarction, and showed that women usually present with atypical symptoms and require less invasive diagnostic and curative procedures. In Palestine, on the other hand, there is insufficient research to assess sex disparities in myocardial infarction. Because gender disparities can contribute to the presentation, management, and outcome variations, we plan to conduct a retrospective study to investigate this.

Methods

A retrospective cohort study to include all patients with myocardial infarction presented to An-Najah National University Hospital from 2018 to 2020 was used. In addition, age, sex, body mass index, smoking history, ST-segment elevation myocardial infarction, non-ST segment elevation myocardial infarction, comorbidities, previous percutaneous coronary intervention, and previous coronary artery bypass graft were all gathered and analyzed.

Results

Of the 422 patients that were enrolled in this study, 96 (22.7%) were women. Compared with men, women were older ($p < 0.001$), and had significantly higher rates of diabetes mellitus ($p < 0.001$), and hypertension ($P < 0.001$). In addition, women had more chances to present with atypical chest pain ($p = 0.012$). Furthermore, non-ST segment elevation myocardial infarction was more prevalent among women ($p = 0.017$). Regarding the in-hospital course, the median number of stents was statistically significant in men ($p = 0.029$), but women have significantly higher in-hospital mortality ($p = 0.013$).

Conclusion

Myocardial infarction manifests differently in men and women. However, women had higher comorbidities than men when they presented with an initial diagnosis of myocardial infarction. Overall, women were older than men, had atypical presentations, and had a higher in-hospital mortality rate. Therefore, to minimize the mortality rate in women, healthcare providers must take care of these disparities when diagnosing and treating patients assumed to have myocardial infarction.

Keywords: Palestine; myocardial infarction; sex differences; presentation; management; outcome

