



Coronary Artery Diseases in Women

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Dear Editor-in-Chief

Women in reproductive age are at lower risk of cardiovascular Disease (CVD), but after menopause, this is not true. Although CVD are less prevalent in women, they are followed by more mortality and complications.

In this study, we assessed the role of sex on 1266 hospitalized Acute Myocardial Infarction (AMI) patients in Birjand, center of South Khorassan Province, Eastern Iran, during 2008-2012. Out of them, 30% were women. Mean age of women was 6 yr more than that of men. Moreover, mean of FBS, cholesterol, triglyceride, and LDL was significantly higher in women (Table 1). Mortality of our patients was 8.8%, but women's mortality was significantly higher than men were (i.e. 14.6% VS 6.3%, $P < 0.001$).

Male gender is accounted as an uncontrollable risk factor for CVD. When women's diseases are talked about, reproductive and breast diseases are

associated. However, the most prevalent mortality causes in women are Coronary Artery Disease (54%) and stroke (23%) in descending order. Breast cancer only covers 3% of women's mortality (1). CVDs in women are so notorious that WHO and World Heart Federation allocated the World Heart Day motto during 2011-2013 to Health of Women's Heart (2). On the other hand, in women, especially in low and middle-income countries, the impact of socio-economical, environmental and health behavioral factors are more than men (3).

The reason why mortality in women is higher following AMI is multifactorial. Factors such as older age, more prevalence of diabetes and dyslipidemia in women; besides, their delayed reference to hospital when having AMI, more extensive infarction, as well as heart failure are decisive (4, 5).

Table 1: Mean of age, glucose and lipids in patients with acute myocardial infarction

| MEAN ±SD | AGE (yr) | FBS mg/dl | Cholesterol mg/dl | TG mg/dl | HDL mg/dl | LDL mg/dl |
|--------------|-------------|--------------|----------------------|--------------|--------------|--------------|
| GROUP | | | | | | |
| Male | 60.5±13.6 | 134.6±72.7 | 192.9±46.1 | 126.5 ±81.7 | 43.5±11.4 | 115.7 ±33.2 |
| Female | 66.2±13 | 147.7±87.1 | 208.9±48.4 | 143.5 ± 92.4 | 48.3±13.4 | 125.2± 33.7 |
| P value | <0.001 | 0.007 | <0.001 | 0.003 | <0.001 | <0/001 |

Thus, it is necessary that women's knowledge about heart attack symptoms should increase so that they would refer to emergency wards earlier for sooner and treatments that are more effective if cardiac symptoms occur. Moreover, regular screening for cardiac risk factors in women – particularly diabetes and dyslipidemia- should be done in order to decrease the probability of cardiac diseases.

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References

1. Sofia RR, Serra AJ, Silva Jr JA, Antonio EL, Manchini MT, Oliveira FA, Teixeira VP, Tucci PJ (2014). Gender-Based Differences in Cardiac Remodeling and ILK Expression after Myocardial Infarction. *Arq Bras Cardiol*, 103(2):124-30.
2. Kazemi T, Nik M (2015).” World Heart day 2014” , Significance of cardiovascular diseases in Birjand, east of Iran. *J Res Med Sci*, 20(5):1
3. Sun LY, Lee EW, Zahra A, Park JH (2015). Risk Factors of Cardiovascular Disease and Their Related Socio-Economical, Environmental and Health Behavioral Factors: Focused on Low-Middle Income Countries- A Narrative Review Article. *Iran J Public Health*, 44(4):435-44.
4. Pelletier R, Humphries KH, Shimony A, Bacon SL, Lavoie KL, Rabi D, Karp I, Tsadok MA, Pilote L (2014). GENESIS-PRAXY Investigators. Sex-related differences in access to care among patients with premature acute coronary syndrome. *CMAJ*, 86(7):497-504.
5. Abbasi Sh, De Leon AP, Kassaian S, Karimi A, Sundin O, Soares J, Macassa G(2012). Gender differences in the risk of coronary artery disease in iran. *Iran J Public Health*, 41(3):36-47.