# Prevalence of metabolic syndrome in premature myocardial infarction in Birjand: a case -control study

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**Background and Aim :** Metabolic syndrome is a major risk factor for coronary artery disease (CAD).Aim of this study was to determine the prevalence of metabolic syndrome in patients with premature myocardial infarction (before 50 years of age).

**Methods:** In this case-control study, we compared 98 consecutive patients who were hospitalized in Birjand with acute first myocardial infarction before the age of 50 years and 98 age- and sex-matched healthy controls without a history of coronary artery disease. The case and control groups were categorized according to the National Cholesterol Education Program Adult Treatment Panel (NCEP ATP III) metabolic syndrome criteria [presence of ≥3 of the following: Fasting blood glucose ≥100 mg/dL, triglyceride (TG) level ≥150 mg/dL, low high density lipoprotein (HDL; <40 mg/dL in men and <50 mg/dL in women), blood pressure ≥130/85 mm Hg, and waist circumference >102 cm in men or 88 cm in women]. The data were collected and analyzed by t-test, $\chi(2)$, and logistic regression in SPSS software 11.5.

**Results:** Prevalence of metabolic syndrome was significantly higher in cases than in control group (34.7% in cases, 16.3% in controls, P=0.003). All components of metabolic syndrome except high waist circumstance in the cases group were significantly higher than in control. The most common component of metabolic syndrome was high TG and the least common component was low HDL.

**Conclusion :** We conclude that prevalence of metabolic syndrome in patients with premature myocardial infarction is high; high TG is the most common component of metabolic syndrome.

**Keyword:** Case–control study; metabolic syndrome; premature myocardial infarction