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ABO and Rh, blood group antigens in the myocardial infarction (mi) male patients of the Hail region in Saudi Arabia

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Introduction: According to the WHO world health ranking survey Saudi Arabia ranked 27th in coronary heart disease (CHD) related deaths. CHD was also the leading cause of deaths in Saudi Arabia (WHO, 2014 survey). One of the major reasons for CHD is tobacco use (WHO bulletin 2016) and the rapidly rising cases of obesity in Saudi Arabia due to consumption of unhealthy diet, lack of exercise or any other physical activity. In the recent past inheritance of ABO blood groups has been linked to various diseases such as diabetes many types of cancers and cardiovascular diseases, although several studies have been published showing the association between the inheritance of blood groups (ABO and Rh antigens) and cardiovascular diseases.

Aim: Since the results of previous studies have been inconsistent regarding the association between the CAD and the inheritance of AB and the Rh (D) blood group antigens, and since according to WHO, CAD is the leading cause of death in Saudi Arabia (WHO 2014 survey), we decided to perform a smaller study on 111 male CHD patients who were admitted in the recent past to the king Khaled hospital (KKH) in the Hail region of Saudi Arabia with an acute myocardial infarction (MI).

Materials & Methods: In the current study we randomly chose 329 male control subjects and 111 myocardial infarction male patients who were enrolled at (KKH) Cardiology Department in Hail region of Saudi Arabia. Other risk factors like diabetes, smoking, age, gender, obesity, family history of CAD. The data was analyzed by Z-test.

Results: Out of 329 randomly selected male control subjects 82% were found to be Rh+ and 18% were Rh- , 3.35 were A-, 20.7% were A+, 3.95 were B- and 14.28% were B+, 2.43% were AB- and 8.2% were AB+, 8.5% were O- and 38.3% were O+. among the MI patients Rh- 4.5% and Rh+ 95.5%, A- were 0.9% and A+ were 30.6%, B- were 1.8% and B+ were 18.01% , AB- were 0.9% and AB+ were 6.3%, O- were 0.9% and O+ were 40.5%.

Conclusions: A+ male patients show statistically high incidences of MI and O- show significantly low incidence of MI.

Recent Publications

1. Al-Dossary S S, Sarkis P E, Hassan A, Ezz E I Regal M and Fouda A E (2010) Obesity in Saudi children: a dangerous reality. East Mediterr Health J 16: 1003-1008.
2. Farshori M P Q, Al-Wakid I H, AL Ibrahim I K, ALShammari A F, Alduejieman M, et al. (2016) Distribution of ABO and Rhesus (Rh) blood group antigens in male type 2 diabetes mellitus patients in Hail region of Saudi Arabia: High incidences of diabetes mellitus in males with B+ blood type. Integr Obesity Diabetes 2: 1-6.
3. Fagherazzi G, Gusto G, Clavel-Chapelon F, Balkau B and Bonnet F (2015) ABO and Rhesus blood groups and risk of type 2 diabetes: evidence from the large E3N cohort study. Diabetologia 58: 519-522.

Biography

Yasir Ghareeb Alrashdan is a 5th year Medical student at Hail University, Saudi Arabia. He is the Co-author in this research with his supervisor Dr. M Parvaiz Farshori who has done a lot of important research in medical field.