



Evaluation of Vitamin D3 Level and Apo B/Apo A1 Ratio in Acute Myocardial Infarction Patients in Kerbala Province

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Abstract: Objective:The aim of study to find a possible association between acute myocardial infarction and vitamin D3, Apo A1, Apo B, and Apo B/Apo A1 ratio and other risk factors (age, body mass index and smoking).

Materials and Methods: This case-control study was conducted during the period from Nov. 2015 till Sep. 2016. Forty patients of acute myocardial infarction presented with typical chest pain to the coronary care unit in Al-Hussein Teaching Hospital/ Kerbala. Fifty persons were matched with patient as a control group.

Results: Vitamin D3 deficiency (< 30 ng/mL) were prevalent in patients compared with those considered to be sufficient in vitamin D3 (≥ 30 ng/mL) (odds ratio [OR], 33.78; 95%, confidence interval [CI], 7.28-156.73; $P < 0.001$). The results obtained that 25(OH) D3 was highly significant in smoker when comparison with non-smoker in patient and control group ($p < 0.001$, $P < 0.05$ respectively). The serum Apo B, Apo A1 and Apo B/Apo A1 ratio were highly significant between patient and control group ($P < 0.01$, $P < 0.001$, $P < 0.001$ respectively). On the other hand, vitamin D3 recorded significant decrease with increase serum troponin I in patient group ($P < 0.05$).

Conclusion: The present study showed a highly significant association between vitamin D3, Apo B, Apo A1 levels, Apo B/Apo A1 ratio and patients as compared with control group, and significant correlation between vitamin D3 and age, body mass index and smoking.

Keywords:Acute myocardial infarction, Vitamin D3, ApoA1, Apo B, Apo B/Apo A1 ratio.