International Journal of PharmTech Research
CODEN (USA): IJPRIF, ISSN: 0974-4304, ISSN(Online): 2455-9563
Vol.9, No.11, pp 334-346, 2016

D-dimer and Troponin T Biomarker in Acute Coronary Syndrome in Hilla City

Ali Kareem Hameed*, Ghafil Saihood Hassan, Amir Sahib Al-Mumin

University of Babylon, Hilla-Iraq

Abstract : The acute coronary syndrome (ACS) means the spectrum of many clinical conditions attributed to obstruction of coronary arteries. The most common symptom is chest pain, begins from, stable angina, unstable angina, to myocardial infarction.
The present study included 60 subjects . They were divided into two groups. First group included 30 patients with acute coronary syndrome . Second group included healthy subjects without acute coronary syndrome acted as control group . Their range age was 40—60 years. They are diagnosed by specialist doctor as random sample. The patients group presented in the ward setting from July 2015 to March 2016 in Shahid Al-Mihrab center in Margan Medical City/ Hilla.

Methods:
1-Blood sample for laboratory analysis.
2- Blood pressure measurement.
3-ECG measurement.
4-Echo measurement.

Results:
1-Mean D-Dimer level was increased significantly ($P < 0.01$) in patients group (96.19 ng/ml), compared to control group (51.97 ng/ml).
2- The mean Troponin T level was increased significantly ($P < 0.01$) in patients group (136.57 pg/ml), compared to control group (26.22 pg/ml).
3-The mean Glucose level was increased significantly ($P < 0.01$) in patients group (208.3 mg/dl), compared to control group (129.11 mg/dl).
4- The mean left ventricular ejection fraction was decreased significantly (47.03 %) in patients group compared to control person (55 – 80 %).
5-The mean high density lipoprotein (HDL) level was decreased high significant (P value <0.01) in patients group (22.98 ± 2.12 mg/dl) compare to control group (33.39 ± 3.27).
6-The mean cholesterol level was increased significantly (p value < 0.05) in patients group (194.89 ± 13.43 mg /dl) compared to control group (151.75 ±12.06 mg/dl).
7- The mean triglyceride level was increased significantly (P value < 0.01) in patients group (207.7 5 ± 20.86 mg/dl) compared to control group (80.95 ± 4.74 mg/dl). See table 1.
8-The mean urea and creatinine levels were increased significantly in patients group (64.02 ± 6.94) (3.82 ± 0.41) respectively compared to control group (53.61 ± 5.42) (1.26 ± 0.19). See table 2.
9-The mean Na and K ions levels were increased but not significant in patients group (20.08 ±2. 40) (6.80 ±0.89) respectively compare to control group (16.50 ±1.95) (5.20 ± 0.72). See table 3.
10- Sensitivity of D-dimer = 77 %, while sensitivity of Troponin T = 70%. Specificity of D-dimer = 97%, while specificity of Troponin T = 90%.

Conclusions:
1-The mean D-dimer level was increased significantly in patients group, compared to control group.
2- The mean Troponin T level was increased significantly in patients group compared to control group.

3- The mean glucose level was increased significantly in patients group compared to control group.
4- The mean left ventricular ejection fraction was decreased 9.47 % from normal in patient group.
5-The mean cholesterol and triglyceride level were increased significantly except high density lipoprotein (HDL) level decrease significantly in patients group compared to control group.
6- Sensitivity of D-dimer = 77 %, while sensitivity of Troponin T = 70%. Specificity of D-Dimer = 97%, while specificity of Troponin T = 90%.
Keywords : D-dimer and Troponin T Biomarker, Acute Coronary Syndrome.

*****