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A STUDY OF CARCINOEMBRYONIC ANTIGEN IN PATIENTS WITH UNSTABLE ANGINA AND ITS CORRELATION WITH QUANTITATIVE TROPONIN-I

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Background and aims: Carcinoembryonic antigen (CEA) is a tumour marker associated with various malignancies and is now being investigated as a biomarker for early diagnosis of acute coronary syndromes. Its levels may rise even prior to the elevation of established markers of myocardial necrosis.

Methods: Two groups of subjects with unstable angina and healthy controls with 45 males between 40 to 60 years of age in each group were recruited. Serum CEA concentrations and quantitative troponin-I levels were measured by double sandwich ELISA method in all the subjects and the correlation between the two were observed.

Results: Mean serum CEA concentrations were 5.830 ± 0.284 and 1.676 ± 0.284 ng/ml respectively in unstable angina and control groups and the difference was statistically highly significant ($p < 0.001$). Mean serum troponin-I levels were 0.426 ± 0.073 and 0.449 ± 0.073 ng/ml in unstable angina and control groups respectively ($p = 0.832$). No significant correlation was found between serum CEA and CPK-MB levels in unstable angina (UA) patients ($p = 0.061$). Also, no significant correlation was found between serum CEA and troponin-I levels in UA patients ($p = 0.655$) indicating CEA levels rise independently, and prior to elevation of troponin-I. Statistically significant correlations were found between CEA and BMI, waist circumference, waist hip ratio, systolic and diastolic blood pressures, total leucocyte count, random blood sugar, total cholesterol, HDL and LDL.

Conclusions: CEA is a sensitive biomarker for diagnosis of unstable angina in which the traditional cardiac biomarkers such as CPK-MB and cardiac troponins are not raised. It may have a significant role in diagnosis of unstable angina patients who present with atypical manifestations.

Biography

Gajender Singh Ranga has completed his MBBS at the age of 23 years from MD University Rohtak and completed his MD from prestigious All India Institute of Medical Sciences, Delhi-110095. He is consultant of Medicine for last 20 years and currently acting as Director Professor in Dept of Medicine at Guru Teg Bahadur Hospital and University College of Medical Sciences, Delhi-110095, India. He has published more than 25 papers in reputed journals and has been serving as an editorial board member of Journal of advanced research in Medicine.

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