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Acute Coronary Syndromes

THE ADDITION OF BEVACIZUMAB IN THE TREATMENT OF PATIENTS WITH METASTASTIC CANCER, INCREASES THE INCIDENCE OF CARDIOVASCULAR EVENTS: A PROSPECTIVE STUDY

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Background: The anti-angiogenic agent of bevacizumab is used widely in the treatment of malignancies. A small number of retrospective trials has investigated the effect of bevacizumab on cardiovascular events. The aim of this study was to investigate whether bevacizumab has an impact on major cardiovascular events in patients with metastatic cancer.

Methods: The study population consisted of 147 patients divided into two groups. Group 1 (76 patients) received conventional chemotherapeutic scheme with bevacizumab and group 2 (71 patients) similar chemotherapeutic schemes without bevacizumab. Baseline evaluation before the initiation of the therapy included recording of risk factors for coronary artery disease, previous medication and ECG. All patients were prospectively followed up at 6 and 18 months and the incidence of death, cardiac event, myocardial infarction and deep vein thrombosis was recorded.

Results: Total mortality had no difference between the two groups (28.94% versus 33.80%, p=0.52). On the contrary, cardiovascular events were significantly higher in the bevacizumab group compared to the control group (9.21% versus 1.40%, p=0.03). All cardiovascular events that were recorded were myocardial infarctions and did not cause death. Moreover, patients treated with bevacizumab had higher incidence of deep vein thrombosis (5.26% versus 2.81%, p=0.45). Multivariate analysis using Cox proportional hazards with forward stepwise logistic regression analysis identified left bundle branch block on the baseline ECG, as well as the use of bevacizumab as the only independent predictors of cardiovascular events (p<0.001 HR: 56.72, 95% CI: 7.38-436.10 for LBBB and p=0.03, HR: 13.18, 95%CI: 1.32-130.84 for bevacizumab).

Conclusion: The addition of bevacizumab in the conventional chemotherapeutic scheme for the treatment of metastatic cancer, significantly increases the incidence of myocardial infarction, and cardiovascular events. Left bundle branch block is an independent predictor of cardiovascular death in such population.