Panitumumab effect on arterial stiffness in patients treated for metastatic colorectal cancer.

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ABSTRACT

- The introduction of the "targeted therapies" has represented a remarkable progress in the treatment of cancer. Colorectal cancer (CRC), one of the most frequent cancers in the world, affects one person in 20 in the developed countries, being the second most common malignant disease. Panitumumab is a fully human IgG2 monoclonal antibody that is directed against the human EGFR. While the main side effects described with Panitumumab are skin reaction and diarrhoea the cardiac effects have not been fully addressed. The aim of the present study was to evaluate the effect of Panitumumab on left ventricle function (LVF) and arterial stiffness.

METHODS

The study cohort comprised of 110 consecutive patients (mean age 65±10) admitted in our clinic with metastatic colorectal cancer. 30 patients received Panitumumab with oxaliplatin and capecitabine, 14 received Panitumumab and FOLFOX, 20 Panitumumab and capecitabine and 24 Panitumumab and FOLFIRI.

Patients had full laboratory evaluation before and after treatment. Cardiac function was assessed by means of echocardiogram, blood pressure measurement and arterial stiffness evaluation before and after the termination of chemotherapy. 12 patients lost follow up therefore were not included in the analysis.

RESULTS

Pre and post chemotherapy there was no difference in the levels of systolic and diastolic blood pressure [SBP, DBP, p=NS) and no difference to ejection fraction (EF) p=NS.

There was a significant increase in the arterial stiffness indices.

Specifically augmentation index (AIX75) was increased by 6.2% , p=0.001 and pulse wave velocity carotid-radial and carotid femoral PWVc-r and PWVc-f were significantly increased (11.1 and 11.2, p<0.0001 respectively).

These differences remained unchanged after a multivariate analysis was performed.

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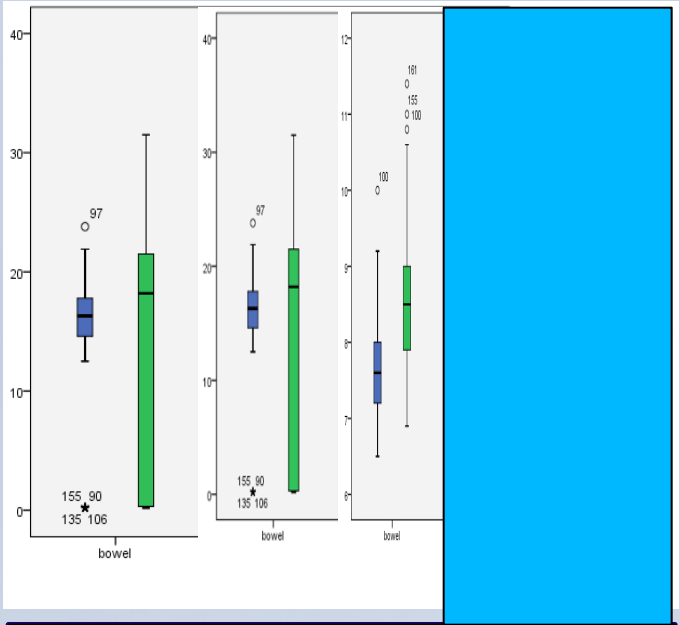

CONCLUSIONS

There is a clear burden on arterial stiffness seen in these patients which is independent of the type of cancer and basic anthropometric measurements. Despite the small number of participants Panitumumab seems to affect arterial stiffening of large vascular tree.

Further studies need to be contacted to investigate the possible mechanisms involved.

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