ANALYSIS OF PERIPHERAL BLOOD OF OVARIAN CANCER PATIENTS INDICATES HIGHER SUB-POPULATIONS OF NATURAL KILLER AND B CELLS COMPARED TO HEALTHY VOLUNTEERS

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Ovarian cancer is a challenging disease to treat, and one of the potential treatments is by immunotherapy. NK cells have been shown to play a role in slowing tumour progression and cancer development. This study aims to investigate the numbers of NK cells and other lymphocyte sub-populations in ovarian cancer and their impact on ovarian cancer clinical outcome. This project aims to study the significance of different lymphocyte populations, particularly NK cells, involved in the peripheral blood of ovarian cancer patients. Venal blood was drawn from ovarian cancer patients before chemotherapy. PBMCs were isolated from 13 ovarian cancer patients and 11 age-matched healthy volunteers. Immunophenotyping was performed using a commercial kit to quantify the lymphocyte populations and RNA isolation performed to examine the expression of KIR genes using reverse transcription polymerase chain reaction. Immunophenotyping of PBMC was successfully performed on 13 ovarian cancer patients and 11 healthy controls. Significant increases in the mean of peripheral NK cells and B cells were found in ovarian cancer patients as compared to the healthy controls (P=0.0559). No other significant results were obtained for C D4 and CD8 lymphocytes. There was significant increase in numbers of NK cells and B cells in ovarian cancer patients as compared to the healthy volunteers. These results should be pursued with a larger sample size with the hopes of finding a significant difference between the two groups and to provide a keener insight into are promising preliminary results the immune defence against ovarian cancer