The absolute neutrophil count (ANC) was statistically significantly higher in the non-neutropenic compared to neutropenic group but no statistically significant difference occurs in the selenium level of a neutropenic subjects with respect to the control.

SERUM SELENIUM LEVEL IN NEUTROPENIC SUBJECTS ATTENDING KWARA STATE UNIVERSITY TEACHING HOSPITAL ILORIN, KWARA STATE, NIGERIA

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INTRODUCTION

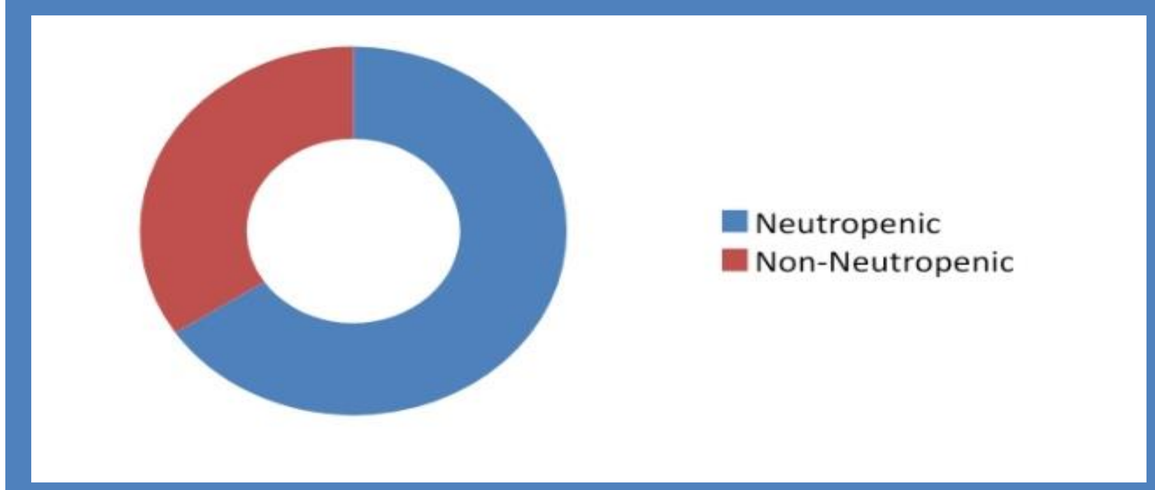
Selenium is a key antioxidant essential for protecting cells, including neutrophils, from oxidative damage through its role in enzymes like glutathione peroxidases. Since neutrophils generate free radicals during immune defense, selenium helps prevent their self-destruction. In neutropenic subjects, low selenium may worsen the condition by increasing oxidative stress and neutrophil loss. Assessing serum selenium levels in such subjects helps explore its possible role in immune function and vulnerability to infections, which are major morbidities in neutropenia. This study aimed to investigate serum selenium level among the neutropenic individuals attending General Outpatients' Department (GOPD) at Kwara State University Teaching Hospital Ilorin, Kwara State, Nigeria.

METHODS

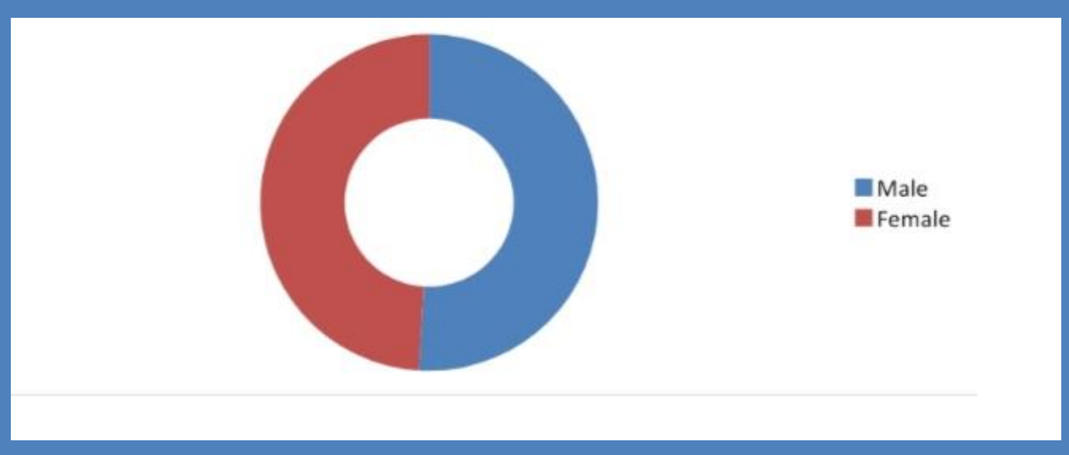
A total of 140 participants were randomly recruited and were classified into two distinct groups: 92 neutropenic subjects and 48 non-neutropenic subjects. The absolute neutrophil count of the blood was obtained using five-part haematology auto analyzer sysmex XN-1000, and serum selenium level was analyzed using flame atomic absorption spectrophotometry. The absolute neutrophil count and selenium level of both controls & subjects were compared statistically.

RESULTS

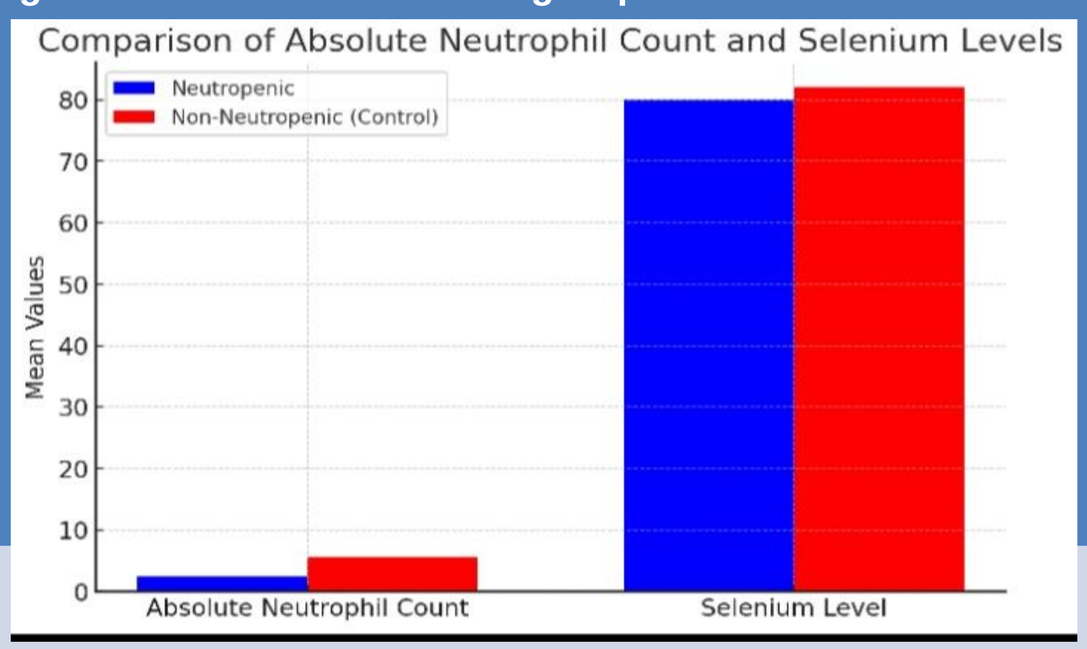
Out of 140 participants, 65.7% were neutropenic subjects and 34.3% were non-neutropenic. The age were between 18-70 years, with no significant differences in age of both groups.



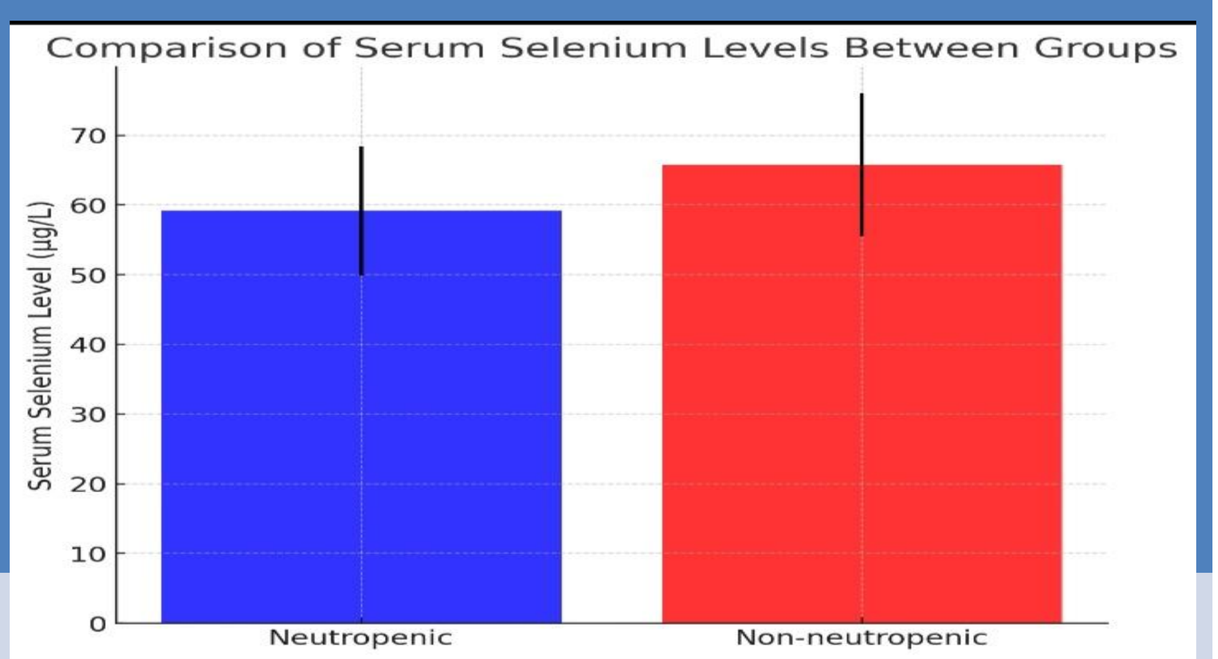
Sex distribution of participats. The proportions of male (51%) and female (49%) were similar across both the neutropenic and non-neutropenic groups.



Absolute neutrophil count (ANC) was higher in the non-neutropenic participants, while selenium level showed no significant variation between groups.



Selenium levels were slightly lower in neutropenic subjects, but the difference was not statistically significant.



CONCLUSION

Our study shows that selenium status does not significantly influence neutrophil count and, therefore, routine assessment of selenium in neutropenic patients is not necessary for optimizing their clinical care. Instead, attention should be focused other well-established factors that contribute to neutropenia and patient management.

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