

## **Correlation of Hematological Indices with Fasting Blood Glucose Level and Anthropometric Measurements in Geriatric Diabetes Mellitus Subjects in Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria**

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**Abstract :** Background: Hyperglycaemia alters qualitatively and quantitatively all the full blood count parameters. The alterations among other factors are responsible for the macrovascular and microvascular complications associated with diabetes mellitus (DM). This study is aimed at correlating haematological parameters in DM subjects with their fasting blood glucose (FBG) and anthropometric parameters. Materials and Methods: This was a cross-sectional study of participants attending DM clinic of Lagos State University Teaching Hospital (LASUTH), Ikeja. The study recruited one hundred and two (102) DM subjects and one hundred (100) non-DM controls. Venous blood samples were collected for full blood count (FBC) assay while FBG was done, structured questionnaires were administered, and anthropometric measurements of all participants were done. Data were analyzed with Statistical Package for Social Science (SPSS) version 23. P was set at  $\leq 0.05$ . Results: The mean age of DM patients was  $64.32 \pm 11.31$  years. Using a haemoglobin concentration cut-off of 11g/dl, 39.2%, and 13% DM and control participants respectively had values lower than 11g/dl. A total of 22.5% and 3% of DM and controls respectively gave a history of previous blood transfusion. White blood cells count and platelet count means were  $(6.12 \pm 1.60$  and  $5.30 \pm 7.52, p=0.59)$  and  $(213.31 \pm 73.58$  and  $228.91 \pm 73.21, p = 0.26) \times 10^9/L$  in DM subjects and controls respectively. FBG and all the anthropometric data in DM subjects were significantly higher than in controls. Conclusions: The prevalence of anaemia in DM subjects was three times higher than in controls. The white blood cell count was higher but not statistically significant in DM compared with controls. But platelet count was higher but not statistically significant in controls compared with DM subjects.

**Keywords :** haematological profile, diabetes mellitus, anthropometric data, fasting blood glucose

**Conference Title :** ICGMH 2022 : International Conference on Geriatric Medicine and Healthcare

**Conference Location :** London, United Kingdom

**Conference Dates :** August 16-17, 2022