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Postmenopausal Biomarkers Predicting Health Risk: A Cross-Sectional Observational Study

Dr Biswajit Samal
Dr R. N. Behera (Prof & Hod)

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I. Introduction

Menopause is defined by permanent cessation of menses due to loss of ovarian follicular activity. It is associated with endocrine, metabolic, and physiological changes increasing the risk of cardiovascular disease, osteoporosis, type 2 diabetes, and neurocognitive disorders.

II. Materials And Methods

A cross-sectional observational study conducted at Hi-Tech Medical College and Hospital from August 2024 to July 2025. A total of 120 postmenopausal women aged 45–70 years were included.

III. Results

Overweight and obesity were observed in 62% participants. High FRAX risk was seen in 38%. Metabolic syndrome features were present in 46%.

IV. Discussion

Decline in estrogen disrupts metabolic, cardiovascular, and skeletal homeostasis. Biomarkers such as lipid profile, CRP, HbA1c, CTX, and P1NP help predict risks and guide prevention.

V. Conclusion

Early use of validated biomarkers helps identify cardiovascular, metabolic, and bone health risks. A multi-marker approach improves long-term outcomes.

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