



AC081

Adult Cardiology & Clinical Cardiovascular Medicine • Poster Presentation

BIOMARKERS (NT-PRO BNP AND D-DIMER) IN PPCM PATIENTS WITH CARDIAC THROMBUS IN MAIDUGURI, NORTHEAST NIGERIA.

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Stand: POSTER #AC081 | **Venue:** Poster Exhibition Hall & Gallery - Eko Convention Centre | **Online Ref:** <https://nigeriancardiacsociety.com/abstracts/AC081>

Background: Peripartum cardiomyopathy (PPCM) is a life-threatening condition associated with increased risk of intra-cardiac thrombus and thromboembolic events. Biomarkers such as D-dimer and N-terminal pro-brain natriuretic peptide (NT-proBNP) may aid in diagnosis, risk stratification, and prognosis.

Objective: To assess the relationship between serum D-dimer and NT-proBNP levels and intra-cardiac thrombus among PPCM patients in Northeast Nigeria.

Methods: A hospital-based cross-sectional study was conducted at the University of Maiduguri Teaching Hospital (UMTH) between April 2022 and December 2023. A total of 101 PPCM patients were recruited. Echocardiography was performed to detect intra-cardiac thrombus, and serum D-dimer and NT-proBNP levels were measured using Enzyme linked immunosorbent assay (ELISA).

Results: Intra-cardiac thrombus was observed in 26.7% of the study participants. The median NT-proBNP was 330 pg/ml (IQR 270–370), while median D-dimer was 205 ng/ml (IQR 105–330). Serum D-dimer was significantly higher in patients with intra-cardiac thrombus [median 360 (330–465) vs 120 (90–270), $p < 0.0001$]. NT-proBNP however did not differ significantly between groups ($p = 0.124$). Logistic regression identified left ventricular ejection fraction (LVEF), tricuspid annular plane systolic excursion (TAPSE), and D-dimer as independent predictors of intra-cardiac thrombus. ROC analysis showed D-dimer >270 ng/ml had excellent diagnostic utility (AUC = 0.92, sensitivity 92.6%, specificity 78.4%) for intra-cardiac thrombus in PPCM.

Conclusion: Elevated D-dimer is a strong independent predictor of intra-cardiac thrombus in PPCM patients, and may therefore serve as a useful biomarker for thrombus screening in PPCM patients in Nigeria. NT-proBNP correlates with structural cardiac changes but not thrombus formation.

Keywords: Peripartum Cardiomyopathy, Cardiac thrombus, Biomarkers, D- dimer, NT-ProBNP