

# THE ROLE OF INFLAMMATORY MARKERS TO SUBCLINICAL ATHEROSCLEROSIS IN HIV PATIENTS-SUPPRESSED ARV DRUGS

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## Background:

HIV infection is related with chronic inflammation and risk for atherosclerosis. Carotid intimal media thickness (CIMT) has been used as marker for subclinical atherosclerosis. Neutrophil to lymphocyte ratio (NLR), platelet to lymphocyte ratio (PLR), monocyte lymphocyte ratio (MLR), Eosinophil leukocyte ratio (ELR) and systemic inflammation index (SII) have been shown to be indicative of systemic inflammation and the surrogate marker for atherosclerosis in general population. We aimed to assess correlation between CIMT and NLR, PLR, MLR, ELR and SII in HIV patient-suppressed ARV drugs.

## Methods:

We conducted cross-sectional study at outpatient HIV clinic in Cipto Mangunkusumo Hospital during August to December 2019 including 20-45 years old HIV patient on therapy ARV drug with undetected virus load, seropositive IgG CMV, without diabetic mellitus and opportunistic infection. Demographic data, blood drawing for evaluating systemic inflammation markers and ultrasonography of carotid for evaluating CIMT were done for each patients. All data were analyzed for correlation using Pearson or Spearman correlation.

## Results:

From 80 subjects, 62,5% was male, mean age was 38,21 years with knowing hypertension 20% dan 53,5% subjects had never smoked. The mean recent CD4 was 622,48 cell/uL. CIMT measured in right and left carotid artery. CIMT from both right and left carotid artery was negatively correlated with PLR ( $r = -0,286$ ,  $p = 0,010$ ;  $r = -0,291$ ,  $p = 0,009$ ) but no significant correlation between CIMT and other systemic inflammation markers.

## Conclusion:

Our study suggest that PLR can be the surrogate marker for subclinical atherosclerosis in HIV patient-suppressed ARV drugs who has no diabetic mellitus or opportunistic infection.

## Disclosure of Interest Statement:

*No grants were received in the development of this study.*