

ABSTRACT

PERIPHERAL BLOOD COUNT PROFILE IN INFLAMMATORY BOWEL DISEASE BASED ON COLONOSCOPY APPEARANCE

Background: Inflammatory Bowel Disease is a disease that involves the intestine and is idiopathic. Colonoscopy is one of the methods to examine Inflammatory Bowel Disease as it could give an image of how a person's GI tract condition is. CBC will measure the number of erythrocytes, leukocytes, thrombocytes, as well as the sizes of erythrocytes. IBD patients may have laboratory results of anemia, thrombocytosis, and leukocytosis. By using CBC, we can see the presence of anemia, thrombocytosis, and leukocytosis of IBD patients.

Aim: This study aims to profile the complete blood count lab examination within IBD patients

Method: This study is a retrospective cross-sectional study. The data was taken from patients with inflammatory bowel disease and fulfill the complete medical record as well as colonoscopy examination results from the internal medicine department at Dr. Sardjito General Hospital in 2015 – 2019. The data taken was then analyzed using SPSS Statistic software. We then further find the correlation of each of CBC parameters with IBD Extent using Kendall tau b coefficient.

Result: Erythrocyte Count is decreased in 31 (38.3 %) of total patients. Hb level is decreased in 36 (44.4 %) of patients and increased in two (2.5 %) of total patients. HCT is decreased in 24 (29.6 %) of total patients and increased in three (3.7 %) of total patients. RBC indices shows that within 36 anemic patients, 14 patients were microcytic hypochromic, 8 were microcytic normochromic, one was microcytic hyperchromic, 3 were normocytic hypochromic, 8 were normocytic normochromic, one was normocytic hyperchromic, and one was macrocytic hypochromic. Leukocyte count showed that four patients (4.9 %) have leukopenia, and 8 patients (9.9 %) have leukocytosis and the remaining 69 to be normal. NLR showed that two patients (2.5 %) have decreased NLR and 33 patients (40.7 %) have increased NLR. Thrombocytosis occurs in 10 (12.3%) of patients and thrombocytopenia occurs in 4 (4.9%) of patients. MPV results showed 35 (43.2%) patients have decreased number. Using Kendall's tau b correlation, MCV is (- 0.287) with (p=0.006) and PLT is (0.212) with (p=0.044)

Conclusion: Anemia occurs to 36 patients (44.4 %) within DR. Sardjito general hospital. Leukocytosis occurs to 8 patients (9.9 %) and leukopenia to 4 patients (4.9 %). Thrombocytosis occurs to 10 (12.3 %) of total patient and thrombocytopenia occurs to 4 (4.9 %) of patients. Only MCV and PLT were statistically significant with (p=0.006) and (p=0.044) respectively and (-0.287) and (0.212) respectively.

Keyword: Inflammatory Bowel Disease, Complete Blood Count, Red Blood Cells, White Blood Cells, Platelet