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Ulcerative colitis: Role of neutrophil-to-lymphocyte and platelet-to-lymphocyte ratios in predicting disease severity

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Background: Neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) are effective markers of inflammation that have been linked with several inflammatory and neoplastic diseases. The aim of our study was to determine the value of NLR and PLR ratios in predicting disease severity in patients with ulcerative colitis (UC).

Methods: We performed a retrospective study including patients with confirmed diagnosis of UC between January 2007 and March 2017. PLR or NLR was measured without demonstrable infection. Two groups were compared: Group 1: patients with endoscopic active UC; Group 2: patients with UC in clinical and endoscopic remission.

Results: A total of 87 patients were included. The mean age was 40 years (range 19–65 years). The sex ratio was 0.84 (38 males, 45 females). The PLR ratio was higher in group 1 than in group 2 (mean 111 vs. 77.1, p = 0.052). Similarly, activity disease was associated with a high NLR (mean 6.2 in Group 1 vs. 2.8 in Group 2, p = 0.042). In univariate analysis, the presence of endoscopic lesions was significantly correlated with a reactive protein (CRP) level >10 mg/dl and an albumin level ≤28 g/l.

Conclusions: Our results show that either high NLR or PLR levels can predict active endoscopic disease. This could be useful in stratifying patients and determining individual treatment plan, particularly when these parameters are used in combination with other inflammatory markers (CRP, fecal calprotectin).

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High body mass index and anaemia at diagnosis are predictors of extra-intestinal manifestations in children with inflammatory bowel disease

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Background: Extra-intestinal manifestations (EIM) are common in inflammatory bowel disease (IBD). Although well-investigated, the current ability to predict occurrence of EIM, especially among children, is poor. The aim of our study was to define predictors for EIM in children with IBD.

Methods: We included children with IBD from the paediatric gastroenterology unit, “Dana-Dwek” children’s hospital, in the years 2010–2016. We retrospectively compared demographic and disease variables at diagnosis between children with and without EIM. Children were categorised in quartiles according to body mass index (BMI) percentiles at diagnosis. Disease activity was evaluated by the paediatric Crohn’s disease/ulcerative colitis activity indices (PCDAI/PUCAI).

Results: One hundred children were evaluated: 62 with Crohn’s disease and 38 with ulcerative colitis. The median age (IQR) at diagnosis was 13.9 (11.9–15.2) years. Ten children (10%) presented with EIM at diagnosis and additional 36 children (36%) exhibited EIM during median (IQR) follow-up of 2.1 (1.2–3.8) years. The most common EIM were aphthous stomatitis (18%), arthralgia (14%), skin manifestations (8%), and arthritis (6%). Variables at diagnosis that were associated with occurrence of EIM during follow-up were BMI in the lower or upper quartile (HR 9.3 and 23.7, respectively, p < 0.001, Figure 1), moderate-to-severe disease activity (HR 4.4, p < 0.001, Figure 2), anaemia (HR 2.3, p < 0.001), abnormal C-reactive protein (HR 1.04, p < 0.001), and extensive involvement in Crohn’s disease (HR 3.4, p = 0.025). In a multivariate analysis, anaemia (HR 2.1, p < 0.001) and BMI in the upper quartile (HR 3.54, p = 0.004) at diagnosis were associated with EIM.

Time to extra-intestinal manifestations by body mass index at diagnosis