Platelet-to-lymphocyte ratio

The platelet-to-lymphocyte ratio (PLR) has emerged as an informative marker revealing shifts in platelet and lymphocyte counts due to acute inflammatory and prothrombotic states. PLR has been extensively examined in neoplastic diseases accompanied by immune suppression and thrombosis, which can be predicted by combined blood cell counts and their ratios. Several large observational studies have demonstrated the value of shifts in PLR in evaluating the severity of systemic inflammation and predicting infections and other comorbidities, in inflammatory rheumatic diseases. The value of PLR as an inflammatory marker increases when its fluctuations are interpreted along with other complementary hematologic indices, particularly the neutrophil-to-lymphocyte ratio (NLR), which provides additional information about the disease activity, presence of neutrophilic inflammation, infectious complications, and severe organ damage in systemic lupus erythematosus ¹⁾.

Hematologic inflammatory markers are simple, inexpensive prognostic markers for various conditions. The prognostic significance of representative markers neutrophil to lymphocyte ratio (NLR), plateletto-lymphocyte ratio (PLR), monocyte lymphocyte ratio (MLR) and red cell distribution width (RDW) in patients exist in a variety of tumors.

Inflammatory response plays a vital role in the pathological mechanism of intracerebral hemorrhage. It has been recently reported that neutrophil to lymphocyte ratio (NLR) could represent a novel composite inflammatory marker for predicting the prognosis of intracranial hemorrhage (ICH).

Neutrophil to lymphocyte ratio (NLR), platelet-to-lymphocyte ratio, the systemic immune inflammation index (SII), and red blood cell distribution width (RDW), have been recognized as promising predictors for histological grade and prognosis in multiple cancer types.

PLR and NLR have high predictive value in rheumatic diseases with predominantly neutrophilic inflammation (e.g., Behçet disease and familial Mediterranean fever). High PLR, along with elevated platelet count, is potentially useful in diagnosing some systemic vasculitides, particularly giant-cell arteritis. A few longitudinal studies on rheumatic diseases have demonstrated a decrease in PLR in response to anti-inflammatory therapies. The main limitations of PLR studies are preanalytical faults, inadequate standardization of laboratory measurements, and inappropriate subject selection. Nonetheless, accumulating evidence suggests that PLR can provide valuable information to clinicians who encounter multisystem manifestations of rheumatic diseases, which are reflected in shifts in platelet, lymphocyte, neutrophil, or monocyte counts. Interpretation of PLR combined with complementary hematologic indices is advisable to more accurately diagnose inflammatory rheumatic diseases and predict related comorbidities ²⁾.

Platelet-to-lymphocyte ratio for mechanical thrombectomy outcome

Platelet-to-lymphocyte ratio for mechanical thrombectomy outcome

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Gasparyan AY, Ayvazyan L, Mukanova U, Yessirkepov M, Kitas GD. The Platelet-to-Lymphocyte Ratio as an Inflammatory Marker in Rheumatic Diseases. Ann Lab Med. 2019 Jul;39(4):345-357. doi: 10.3343/alm.2019.39.4.345. PMID: 30809980; PMCID: PMC6400713.

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