

[MP310] IS THE RED BLOOD CELL DISTRIBUTION WIDTH A PREDICTOR FOR RESPONSE TO TREATMENT IN ADULT PATIENTS WITH NEPHROTIC SYDNROME?

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INTRODUCTION AND AIMS:

In general, patients with treatment-resistance nephrotic syndrome (NS) have a chronic inflammatory state and various degree of oxidative stress. Red cell distribution width (RDW) is also being recognized as a global marker of chronic inflammation and oxidative stress. Novel biomarkers for predicting future of response treatment in patient with nephrotic syndrome are needed. There is no study that has been investigated the relationship between RDW levels and response to treatment in patients with NS. We aimed to investigate the relationship between RDW values and treatment response in patients with NS.

METHODS:

We conducted a retrospective study of adult patients with NS due to primary glomerulonephritis's between January 2006 and December 2012. Patients were divided into three groups on the basis of their response the treatment. Group 1 was composed of patients with complete remission. Group 2 was composed of patients with partial remission. Group 3 was composed of patients with resistant to treatment. RDW values were obtained before treatment and end of the treatment schedules. Serum fasting blood glucose, albumin, creatinine, uric acid, lipid parameters, and levels of proteinuria were obtained in all subjects. Estimated glomerular filtration rate was calculated. Renal ultrasound was performed in all subjects. Smoking habits were recorded.

RESULTS:

A total of 173 patients were recruited to the study. Mean age were 44.9 ± 16.3 in group 1 (n=55), 42.9 ± 16.1 in group 2 (n=53), and 39.75 ± 13.6 in group 3 (n=68) ($p > 0.05$). While the highest baseline mean RDW value was found in group 3 patients (17.8 ± 1.8) ($p < 0.05$), the lowest mean RDW value was found in group 1 patients (13.4 ± 0.7) before treatment ($p < 0.05$). We found significant decrease in RDW value after successful treatment in group 1 and group 2 ($p < 0.05$). In group 3 patients, there was no change in RDW value after treatment ($p > 0.05$). The most of the patients with remission (n=49, 89%) have a baseline RDW values were under 14% ($p < 0.001$, Kendal Tau: -0.86). The most of resistance to treatment was appeared in patients who have RDW level was $> 15\%$ during new diagnose (86.1 %) ($p < 0.001$, Kendal Tau: -0.87).

CONCLUSIONS:

Our results suggest that pretreatment RDW values may be a useful predictive biomarker for treatment responsiveness in adult patients with nephrotic syndrome due to primary glomerulonephritis's.

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