



VASCULAR DISEASE, VASCULITIS

## **DETERMINATION OF RED BLOOD CELL DISTRIBUTION WIDTH IN PATIENTS WITH PRIMARY CUTANEOUS VASCULITIS COMPARED TO SYSTEMIC VASCULITIS**

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Introduction: Red blood cell distribution width (RDW) has been considered as an inflammatory marker in various disorders. Evaluation of RDW value can also be used as a novel and additional marker for differentiating systemic vasculitis from primary cutaneous vasculitis.

Objective: To compare RDW value between patients with cutaneous vasculitis with systemic vasculitis, thereafter to find out its role as an effective indicator to distinguish both forms of vasculitis.

Materials and methods: This cross sectional study was included 48 patients. 3ml blood was collected in EDTA tube to measure RDW value. Structured questionnaire properly maintained. Patient's disease activity also scored and plotted according to Birmingham vasculitis activity score. Statistical analysis was performed by using SPSS. Quantitative and qualitative variables (gender) between primary cutaneous and systemic vasculitis were compared by student's t test and chi-square test respectively. For all statistical tests, p-value less than 0.05 was considered as statistically significant.

Results: Mean age of systemic vasculitis and primary cutaneous vasculitis were  $36.75 \pm 13.67$  and  $25.16 \pm 9.47$  months respectively. Males were mostly (68.8%) affected by systemic vasculitis and females (59.4%) were mostly affected by cutaneous vasculitis. Significantly high mean RDW in patients with systemic vasculitis compared to primary cutaneous vasculitis ( $15.09 \pm 0.92$  vs.  $13.48 \pm 1.1$ ,  $p = 0.000$ ). BVAS was significantly greater ( $13.93 \pm 5.10$  vs.  $4.87 \pm 2.69$ ,  $p = < 0.001$ ) in systemic vasculitis as well as in patients with high RDW group ( $11.73 \pm 5.71$  vs.  $5.37 \pm 3.96$ ,  $p = < 0.001$ ). Optimal RDW cut off point for differentiating systemic vasculitis from cutaneous vasculitis was 14.2 with 81.3% sensitivity and 81.2% specificity.

Conclusion: Present study revealed importance of RDW monitoring along with disease





activity in patients with any form of vasculitis. Systemic vasculitis had higher level of RDW. So RDW can be considered as a marker to discriminate systemic vasculitis from primary cutaneous vasculitis.

