

Author's Reply

Factors affecting the levels of red cell distribution width

Dear Editor,

We thank to the authors for their valuable comments about our study¹.

They emphasized that elevated red cell distribution width (RDW) helps to early diagnosis of nutritional deficiency of iron, folic acid and vitamin B12. Also they pointed to elevated RDW could be associated with sickle cell anemia, hemolytic anemia, chronic liver disease and myelodysplastic syndrome.

Possible causes of high RDW levels can be determined by comparison with mean corpuscular volume (MCV). The MCV is the average amount of space occupied by each red blood cell. If both the RDW and MCV levels are increased, there are several possible causes such as liver disease, hemolytic anemia and vitamin B12 or folic acid deficiency. Another condition is the combination of high RDW levels with low MCV levels. This may be resulted from iron deficiency anemia or thalassemia intermedia. In our study, the patient groups did not have nutritional anemias according to their MCV levels were in normal range for their age groups (6 months up to 6 years old)². Also, due to retrospective nature of our study, it is not possible to investigate ferritin, folic acid and vitamin B12 levels of the patients.

Secondly they asked that which device (brand/ model) was used for the RDW measurement. All of the measurements were made by the same device, and the normal range of RDW was % 11.5-14.5. They mentioned that RDW reference ranges may vary depending on many factors such as age and gender. According to traditional knowledge; RDW reference values are not affected neither age nor gender in childhood years³. Lippi G et al⁴ investigated RDW values on a cohort of blood donors, aged > 20 years, and they found that high level of RDW is strongly dependent upon older age and female gender. But their study does not contain pediatric age group.

Further prospective studies including larger cohorts would be more revealing.

Conflict of Interest

The Authors declare that they have no conflict of interests.

References

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