

Letter to the Editor

Can we trust RDW for differentiation of febrile seizure types?

Dear Editor,

We have read with great interest the recent article by Goksugur et al¹. In this excellent study, the authors investigated the usefulness of the hematological parameters especially neutrophil-to-lymphocyte ratio (NLR) and red blood cell distribution width (RDW) in the differentiation of febrile seizure types. They concluded that NLR and RDW were simple, effective and practical predictors for differentiation of febrile seizure types. We appreciate and congratulate the authors for having addressed such an important issue. However, we think that there are some points that should be emphasized about this study.

Firstly, elevated RDW helps to early diagnosis of nutritional deficiency of iron, folic acid and vitamin B12². Additionally, elevated RDW could be associated with other conditions such as sickle cell disease, hemolytic anemia, chronic liver disease and myelodysplastic syndrome^{3,4}. However, authors didn't mention from these factors which may affect RDW values. We think that it would be more valuable to present ferritin, folic acid and vitamin B12 levels of the patients with exclusion other conditions in the study.

Secondly, there is no mention in the study, which device (brand/model) was used for the RDW measurement. Additionally, RDW reference ranges may vary depending on many factors such as age, gender, and device (brand/model) or measurement methods used⁵.

As a result, RDW is an inexpensive, feasible, but insufficient predictor. Itself without clinical features may not accurately provide information about the classification of febrile seizure. Furthermore, factors affecting RDW results such as iron, vitamin B12, folic acid deficiency and other conditions should be considered to conclude that RDW is a useful diagnostic tool to classify the febrile seizure.

Conflict of Interest

The Authors declare that they have no conflict of interests.

References

- 1) GOKSUGUR SB, KABAKUS N, BEKDAS M, DEMIRCI OGLU F. Neutrophil-to-lymphocyte ratio and red blood cell distribution width is a practical predictor for differentiation of febrile seizure types. *Eur Rev Med Pharmacol Sci* 2014; 18: 3380-3385.
- 2) SAZAWAL S, DHINGRA U, DHINGRA P, DUTTA A, SHABIR H, MENON VP, BLACK RE. Efficiency of red cell distribution width in identification of children aged 1-3 years with iron deficiency anemia against traditional hematological markers. *BMC Pediatr* 2014; 15: 14-18.

- 3) SAHLI CA, BIBI A, OUALI F, FREDJ SH, DAKHLAOUI B, OTHMANI R, LAAOUINI N, JOUINI L, OUENNICHE F, SIALA H, TOUHAMI I, BECHER M, FATTOUM S, EL HOUDA TOUMI N, MESSAOUD T. Red cell indices: differentiation between β -thalassemia trait and iron deficiency anemia and application to sickle cell disease and sickle cell thalassemia. Clin Chem Lab Med 2013; 51:1595-1603.
- 4) FERRARA M, CAPOZZI L, RUSSO R, BERTOCCO F, FERRARA D. Reliability of red blood cell indices and formulas to discriminate between beta thalassemia trait and iron deficiency in children. Hematology 2010; 15:112-115.
- 5) LIPPI G, PAVESI F, BARDI M, PIPITONE S. Lack of harmonization of red blood cell distribution width (RDW). Evaluation of four hematological analyzers. Clin Biochem 2014; 47: 1100-1103.

Ö. Kartal¹, A.T. Kartal²

¹Department of Pediatrics, Aksaz Military Hospital, Mugla, Turkey

²Department of Pediatrics, Marmaris State Hospital, Mugla, Turkey