Red Cell Distribution Width: A Novel and Simple Predictor of Mortality in Chronic Obstructive Pulmonary Disease

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To cite this article: Sevket Balta, Mehmet Aydogan, Sait Demirkol, Mustafa Cakar, Emin Ozgur Akgul & Hakan Sarlak (2014) Red Cell Distribution Width: A Novel and Simple Predictor of Mortality in Chronic Obstructive Pulmonary Disease, COPD: Journal of Chronic Obstructive Pulmonary Disease, 11:4, 475-476, DOI: 10.3109/15412555.2013.813449

To link to this article: https://doi.org/10.3109/15412555.2013.813449

Published online: 25 Feb 2014.
Dear Editor,

We have read with great interest the recently published article entitled, “Red Blood Cell Distribution (RDW) and Survival in Patients with Chronic Obstructive Pulmonary Disease (COPD),” by Seyhan and coworkers (1). In this very well presented article the authors aimed to evaluate whether RDW is effective as a prognostic marker in a population with COPD. They demonstrated that elevated RDW levels in patients with COPD are associated with an increased risk for mortality. They suggested that an elevated RDW may be an indicator of underlying inflammation and oxidative stress in COPD and it could be a useful, inexpensive, and CVD associated prognostic factor in COPD patients.

COPD is one of the most important causes of morbidity and mortality in the world, and is characterized by irreversible airway obstruction due to narrowing of small airways, bronchiolitis, and destruction of the lung parenchyma (2). COPD is complicated by frequent and recurrent acute exacerbations which cause unfavorable results for patients and healthcare providers, such as a negative impact on health-related quality of life, pulmonary function, utilization of healthcare resources and survival. The increased level of inflammatory markers in serum play important roles in the pathogenesis of COPD (3). Red cell distribution width is a measure of the variability in the size of circulating red blood cells and is a part of the complete blood count panel. It is frequently used as a technique for the differential diagnosis of anemia and could be elevated in any condition where reticulocytes are released into circulation. RDW is a standard laboratory parameter that indicates variation in red blood cell size on a standard hemogram and is usually used in assessing blood diseases. It is associated with mortality in the general population. RDW has recently been demonstrated to highly correlate with short- and long-term outcomes in different clinical settings (4). However, conditions in the differential diagnosis of anemia might affect RDW, and so this parameter might be changed in the presence of any abnormalities such as coronary artery disease, hypertension, diabetes mellitus, thyroid disease, renal or hepatic dysfunction, inflammatory diseases, the use of any medications, and is related to nutritional deficiency and ethnicity.

Additionally, not only RDW, but also mean platelet volume (5), neutrophil lymphocyte ratio (6), platelet distribution width, uric acid and a gamma-glutamyltransferase are easy methods to assess trauma patients. These markers might be useful in clinical practice.

Finally, because the authors evaluated trauma patients retrospectively in the present study, the authors might not accurately define how much time they specified on measuring RDW levels due to delayed blood sampling that can cause abnormal results in RDW measurements.
In conclusion, we believe that the findings obtained from the present study will lead to further large-scale prospective studies evaluating the relationship between RDW and COPD patients. However, RDW alone without other inflammatory markers may not give proper information to researchers about the inflammatory status and prognostic indication of patients. So, from that point of view we think that it should be evaluated in association with other serum inflammatory markers.

**Declaration of Interest Statement**

There is no conflict of interest.

**References**


