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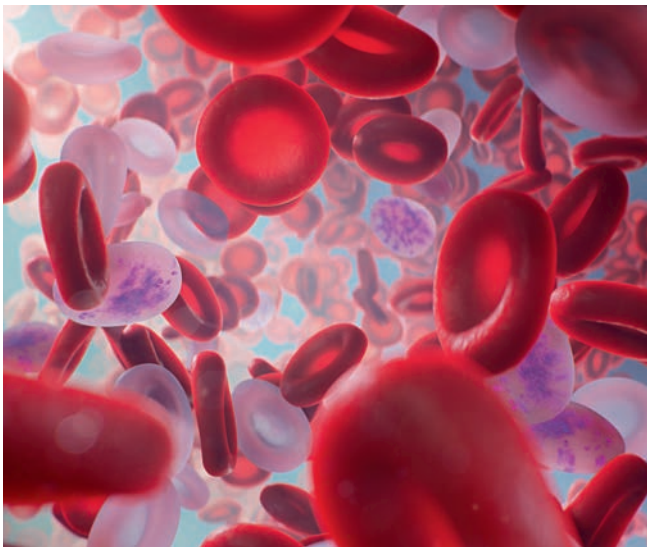
PUBLICATION SPOTLIGHT

Reticulocyte haemoglobin equivalent (RET-H*e*) as a complete blood count parameter for assisting pre- and postoperative iron deficiency assessment

Patient blood management (PBM) is an evidence-based, multidisciplinary approach to caring for patients who might need a blood transfusion. One important pillar of PBM is to diagnose, reduce and prevent anaemia to avoid transfusions in all kinds of clinical settings. For a rational and successful pre- and postoperative anaemia diagnosis and therapy, a timely diagnosis of patients is important. For patients displaying iron deficiency with or without anaemia, this allows an effective iron substitution and monitoring in the context of PBM.

Several studies showed that the reticulocyte haemoglobin equivalent is a parameter for aid in diagnosis and monitoring of iron supply to erythropoiesis. In contrast to the reticulocyte count (RET) giving an immediate indication of the current rate of erythropoiesis, the reticulocyte haemoglobin equivalent (RET-H*e*) reflects the iron availability for erythropoiesis and the overall quality of erythropoiesis [1, 2]. Changes in iron availability for erythropoiesis can be detected earlier and more reliably compared to biochemical markers such as ferritin and transferrin saturation [3-5]. Pre- and postoperative measurement of RET-H*e* as a complete blood count parameter to aid in the diagnosis of patients at risk for latent and/or functional iron deficiency anaemia has been suggested to proactively initiate treatment, avoid complications and prevent longer hospitalization [1, 6–8].



List of references

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[1] ***Hoenemann C et al. (2021):*** *Reticulocyte Haemoglobin as a Routine Parameter In Preoperative Iron Deficiency Assessment. Endocrinol Metab Vol. 5 No.1: 154.*

[2] ***Hoenemann C et al. (2021):*** *Reticulocyte and Erythrocyte Hemoglobin Parameters for Iron Deficiency and Anemia Diagnostics in Patient Blood Management. A Narrative Review. J Clin Med. 2021; 10(18): 4250.*

[3] ***Van Wyck DB et al. (2010):*** *Analytical and biological variation in measures of anemia and iron status in patients treated with maintenance hemodialysis. Am J Kidney Dis. 2010; 56(3): 540–546.*

[4] ***Thomas L et al. (2005):*** *Reticulocyte hemoglobin measurement--comparison of two methods in the diagnosis of iron-restricted erythropoiesis. Clin Chem Lab Med. 2005; 43(11): 1193–1202.*

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