

Letter to the Editor

Erythrocyte sedimentation rate

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In their article entitled: "The decrease in erythrocyte sedimentation rate related to general anesthesia", *Clin Hemorheol Microcirc* 35 (2006) 459–462, Caglayan and co-workers have investigated the effects of general anesthetic agents on erythrocyte properties, reflected in changes in the Erythrocyte Sedimentation Rate (ESR). In their introduction the authors referred to the one-hour ESR method as originally described by Westergren some 80 years ago, that "has remained unchanged and used most widely in the clinical laboratories". However, in the "Materials and methods" section it was written that "ESR was measured using the Test-1 automated ESR analyzer . . . in two hours". Without any further reference to the recently introduced, completely different, Test-1 technique [1], one could think that they have used the automated Westergren ESR technique, read after two hours, as it is sometimes performed. Instead, the Test-1 instrument, really used in this study, is said to measure erythrocyte sedimentation in 20 seconds! It is confusing and incorrect to indicate results obtained with the latter instrument as ESR since, in fact, only RBC aggregation is measured with this method and only by using an artificially obtained multiplication factor, the final outcome finishes at the level of real ESR-results. Furthermore, this holds only within the limits of normal-values since various publications have indicated significant deviations between both techniques at the abnormal, higher ESR level [2,3], in other words, in the region of interest! Finally, the overall comparability of these two systems is questioned.

Therefore, the authors have contributed to the confusion by incorrectly referring the technique used in their study to ESR. It is questionable whether suggestions by others [4] to identify the results obtained with Test-1 as "Length of Sedimentation Reaction in Blood" are correct since sedimentation is out of the question here and as long as the results are expressed as mm/hr, it is no length either. Although it is indeed no rate, the term ESR should be reserved for the Westergren technique proposed as the reference method by the International Council for Standardization in Haematology (ICSH).

References

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