Correspondence

Extremely elevated erythrocyte sedimentation rate. *Etiology at a tertiary care center in Saudi Arabia*

To the Editor

Yousuf et al[1] stated in their study various causes of the extremely elevated erythrocyte sedimentation rate (ESR) in their studied patients. Many of these diseases have multi-systemic involvements. The main biological marker of inflammatory changes is well-known as an increase in the ESR. However, various intrinsic factors might influence the ESR. For example, it could be falsely reduced (polycytemia, microcytosis, or fibrinogen consumption), falsely normal (polyglobulia, cryoglobulinemia, hemoglobinopathy) or spuriously high in the absence of inflammation (anemia, hypergammaglobulinemia). Several pitfalls could be avoided if it is remembered that the acute phase reactants, including ESR, could be modified by causes other than inflammation: low fibrinogen in intravascular coagulation, very low haptoglobin in hemolysis, raised orosomucoid in renal insufficiency, and elevated transferrin in iron deficiency. Furthermore, liver insufficiency, or leakage through the kidney or gut lesions could lower them.[2,3] Considering that observation might change the frequency distribution of various causes of extremely elevated ESR stated in Yousuf et al's study.[1] Nevertheless, elevated ESR must be considered as a marker of underlying illness rather than a diagnostic test for specific diseases.

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Reply from the Authors

We thank Prof. Mahmood D. Al-Mendalaw for his interest and comments on our article. We agree that the ESR can be affected by the confounding factors as cited by him. However, being a retrospective study, it was not possible for us to rule in or rule out these factors in our patients. In fact, it may be difficult to pinpoint the exact cause of change in the ESR in patients who have multiple reasons associated with elevated ESR in the modern era of patients having co-morbidities. For this reason, in a patient with more than one etiology explaining extremely elevated ESR, we looked at the event coinciding with a recent change of ESR from the baseline elevated value. This has been described in the patients and method section of our article. Factors that may influence the ESR have been well tabulated in a review article on the clinical utility of ESR.[4]

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