Re: C-Reactive Protein versus Erythrocyte Sedimentation Rate: Implications Among Patients with No Known Inflammatory Conditions

To the Editor: Alende-Castro et al present an interesting observation of the disparity in elevation of C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) in people without inflammatory disorders.[1] A similar disparity was noted in patients with inflammatory disorders.[2] The study was geared toward determining if continued availability of ESR was warranted in the laboratory menu. Patients with elevated ESR and not elevated CRP mainly consisted of patients with inflammation of the bones and skin. While skin inflammation is usually visible, ESR was instrumental in diagnosing and monitoring patients with bone inflammation. Despite being an ancient laboratory test without a known molecular basis, it was determined that continued availability of ESR in the laboratory menu is warranted.

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Response: Re: C-Reactive Protein versus Erythrocyte Sedimentation Rate: Implications Among Patients with No Known Inflammatory Conditions

To the Editor: We agree with Dr. Singh that both erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) are still useful in the evaluation of inflammatory disorders. The ESR increase during inflammation is slower than that of CRP, and the decrease after inflammation resolution is also slower, as reviewed elsewhere.[1] This may explain why the discordant pattern of high ESR with normal CRP is associated with resolving inflammatory conditions in hospital patients[2] and general practice.[3] Moreover, ESR is known to be affected by noninflammatory conditions such as changes in red blood cells (size, shape, or number) and by the presence of noninflammatory molecules in the serum such as immunoglobulins (eg, in multiple myeloma).[1] Recent meta-analysis indicates that, despite observed heterogeneity among studies, ESR and CRP have similar diagnostic accuracy in assessing acute inflammation, especially in orthopedic conditions.[4] Furthermore, the combined use of ESR and CRP enhances diagnostic accuracy.[4] Our study was performed in subjects with no known inflammatory disorders and therefore cannot address this point. The joint request of ESR and CRP is a common (although not recommendable) practice in asymptomatic or mildly symptomatic individuals. In that setting, the discordant pattern of high ESR and normal CRP was associated with greater age, whereas the pattern of elevated CRP and normal ESR was associated with higher body mass index.[5]

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