Changes in Overall Health May Have Caused Recent Declines in Erythrocyte Sedimentation Rate in Patients with Rheumatoid Arthritis

To the Editor:

Abelson, *et al* demonstrate, via metaanalysis of 84 cohort studies, a decline in erythrocyte sedimentation rate (ESR) levels from around 47 mm/h beginning in 1954 to less than 30 mm/h after 1985, a decline of about 30%[1]. ESR may yield different results based upon the technique employed, with Westergren yielding higher results than Wintrobe, for example. Although Westergren has become the accepted preferred method over time[2], I cannot discern from the article if differences in laboratory techniques may account for some of the interstudy variability in ESR levels. Assuming that the metaanalysis does, however, document a decrease in ESR, Abelson's observation that this "may reflect changes in the natural history and approaches to therapy in RA" is but one of many plausible explanations worth considering.

For example, we may be diagnosing and enrolling patients with RA in trials with milder disease states, perhaps due to better diagnostic modalities, a form of ascertainment bias towards patients with lower ESR. Patients taking agents such as "statins," used only in recent years, might manifest lower ESR levels. Moreover, public health improved dramatically in most industrialized societies throughout the 20th century, leading to lesser prevalence and mortality from infectious diseases such as influenza, pneumonia, and tuberculosis[3], all diseases with inflammatory components. In the latter half of the 20th century improvements in the treatment of cardiovascular disease and cancer contributed to even greater increases in human longevity[4]. Could the decline in ESR described so ably by Abelson, *et al* be an epiphenomenon, reflecting changes in diagnostic criteria, declines in infectious disease incidence, or more aggressive therapies for other chronic conditions?

Without ESR data from so-called "healthy," or at least nonrheumatoid, contemporary controls, we cannot attribute the ESR declines observed by Abelson to RA or its treatment. Nonetheless, Abelson, *et al* deserve praise for bringing this interesting medical and historical question to the attention of *The Journal*'s readership.

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J Rheumatol 2010;37:5; doi:10.3899/jrheum.080952