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## Editorial

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# ESR in the elderly – has it outlived its usefulness?

The potential of the erythrocyte sedimentation rate (ESR) to provide useful information has been the subject of controversy for a considerable time. It has been suggested that the ESR is outdated<sup>1</sup> and that it may be time to abandon its use,<sup>2</sup> although comparison with other measurements of acute phase proteins and their activity has shown little advantage over the traditional low-cost ESR.<sup>3,4</sup> Plasma viscosity was noted to have an advantage in that it was unaffected by anaemia,<sup>4</sup> although this is offset by the fact that it is more expensive and more labour-intensive.

A subject of particularly intense debate has been the significance of ESR measurement in the elderly. What is the normal reference range in the elderly? What level of ESR merits investigation of an elderly patient and in what context?

Tinetti<sup>5</sup> found a post-test probability of disease in 75–85% of symptomatic aged patients presenting with an ESR above 50mm/h. The significance of such moderate elevation of ESR deserves further study – which is currently under way.

ESR measurement at any age is of value only in the context of clinical history and examination and is of little benefit as a screening test. In asymptomatic persons, the yield of disease diagnosed as a

result of ESR measurement has been noted to be less than six in 10 000.<sup>6</sup>

A high ESR alone is less significant than when found in association with other abnormalities. In 5–7% of patients, a raised ESR remains unexplained after simple investigations including an infection screen and estimation of plasma proteins and antibodies, etc. In these patients, as long as their clinical condition permits, it is probably best to deal with the anxiety of both the patient and clinician by outpatient review (including repeat ESR) in a few months.

Elderly patients, however, often present with a subacute decline in health status associated with nonspecific symptoms such as fatigue, vague musculoskeletal complaints and impairment of functional activity. The options in these patients are threefold: first, to wait to see if more specific symptoms present at a later stage as a pointer to diagnosis; secondly, to investigate all-comers, subjecting many to inappropriate, costly and sometimes hazardous tests; or thirdly (and perhaps more appropriately), to establish a subset of patients who merit further investigation. Tinetti<sup>5</sup> found that a raised ESR is a good predictor in

those patients in whom the likelihood of new disease is high enough to warrant further diagnostic evaluation. In patients with subacute deterioration, the post-test probability of significant new illness increased from 7% in those with an ESR of less than 20mm/h to 66% in those with an ESR above 50mm/h.

One final point worth bearing in mind when considering appropriate investigation of elevated ESR is that several series have shown infection to be the most common cause – not malignancy, as is popularly supposed.<sup>5,7–9</sup> In fact it has been noted that malignancy is seldom *occult* when ESR is significantly raised.<sup>6,8</sup>

In summary, ESR can be a useful tool as a nonspecific index of sickness, irrespective of age. Far from being outdated, its clinical value may increase further when more information from various studies becomes available regarding its appropriate use and interpretation.

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## References

- 1 Anonymous. The ESR – an out-dated test [Editorial]? *Lancet* 1982; **i**: 372.
- 2 Bottiger LR. Is it time to abandon the ESR [Editorial]? *Acta Med Scand* 1982; **212**: 353–54.
- 3 Katz PR. A comparison between erythrocyte sedimentation rate and selected acute phase proteins in the elderly. *Am J Clin Pathol* 1990; **94**: 637–40.
- 4 Kenny MW. Efficiency of haematological screening tests for detecting disease. *Clin Lab Haematol* 1981; **3**: 299–305.
- 5 Tinetti ME. Use of the erythrocyte sedimentation rate in chronically ill elderly patients with a decline in health status. *Am J Med* 1988; **80**: 844–48.
- 6 Sox HC. The erythrocyte sedimentation rate – guidelines for rational use. *Ann Intern Med* 1986; **104**: 515–23.
- 7 Wyler DJ. Diagnostic implications of markedly elevated erythrocyte sedimentation rate: a re-evaluation. *South Med J* 1977; **70**: 1428–30.
- 8 Fincher RE. Clinical significance of extreme elevation of the erythrocyte sedimentation rate. *Arch Intern Med* 1988; **146**: 1581–83.
- 9 Ford MJ. The significance of gross elevation of the erythrocyte sedimentation rate in a general medical unit. *Eur J Clin Invest* 1979; **9**: 191–94.