

Letter to the editor

CRP and ESR in giant cell arteritis

The cohort of patients with giant cell arteritis (GCA) reported by Gajree et al. showed no significant difference between mean C-reactive protein (CRP) in those with a positive and those with a negative temporal artery biopsy (TAB) in contrast to erythrocyte sedimentation rate (ESR) where there was a statistically higher ESR in the group of patients with a positive biopsy compared to those with a negative one.¹ However, these results should surely be interpreted cautiously given that CRP results were only available for 188/715 TABs, as opposed to ESR results, which were available in 546/715. In addition, the older age of those with a positive biopsy compared to those with a negative one may have been a confounder for the bigger ESR, as ESR rises with increasing age.

There are three large studies that show CRP is a more sensitive marker than ESR for a positive TAB which is diagnostic of GCA.²⁻⁴ The most recent of the studies showed that elevated ESR had a sensitivity of 86%, specificity of 27%, positive predictive value of 25% and negative predictive value of 87%.⁴ The sensitivity of elevated CRP was 87%, specificity 31%, positive predictive value 27% and negative predictive value 89%. The study also showed that the optimal cut-off value for CRP was 26.9 mg/L (sensitivity 75% and specificity 51%) and the optimal cut-off value for ESR was 53 mm/hr (sensitivity 66% and specificity 55%).

The superior sensitivity of CRP compared to ESR is not surprising because the CRP test measures C-reactive protein,

an acute phase reactant, while ESR is an indirect measure of the acute phase response and of levels of acute phase reactant, particularly fibrinogen. It also rises with age. ESR can be influenced by other blood constituents, such as immunoglobulins and can be affected by changes unrelated to inflammation, such as changes in erythrocyte size, shape, and number.⁵

Given the usefulness of CRP in the diagnosis of GCA suggested by the three studies discussed above, we would advocate that patients being evaluated for possible GCA have both CRP and ESR measured.

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