

Letter to the Editor concerning “New Predictive Parameters of Bell’s Palsy: Neutrophil to Lymphocyte Ratio and Platelet to Lymphocyte Ratio”

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To the Editor,

I have read with great interest the article on Bell’s palsy and related blood count assessments by Atan et al. (1). The authors found that the neutrophil to lymphocyte ratio and platelet to lymphocyte are increased in patients with Bell’s palsy. Though increased compared to healthy controls, these ratios were not associated with increased paralysis severity. The authors state that these changes may be concordant with the pathogenesis because Bell’s palsy is an inflammatory disease.

However, from a hematological perspective, there are certain points that need to be emphasized to avoid misunderstanding and clinical confusion. The American Academy of Otolaryngology Head and Neck Surgery Foundation Clinical Practice Guideline on Bell’s Palsy highly recommend that oral corticosteroids should be started within 72 hours of symptom onset (2).

Corticosteroids are well known to show dramatic effects on blood cell counts. Specifically, the administration of glucocorticoids results in neutrophilic leukocytosis, accompanied by marked reductions in circulating eosinophils, monocytes and lymphocytes (3). These changes are so dramatic that a single dose of glucocorticoid leads to lymphopenia within 2 hours of the dose, peaked at 6 hours and resolved by 24 hours (4). The increase in circulating neutrophil is due to impaired neutrophilic migration to sites of inflammation, enhanced release of cells from the bone marrow and inhibition of apoptosis. Regarding lymphocytes, glucocorticoids rapidly deplete circulating T cells by enhanced circulatory emigration, inhibition of interleukin-2, a major T cell growth factor, impaired release of cells to the circulation and apoptosis induction (5). Number of circulating B cells are also reduced but to a lesser extent.

Although the major argument of this study is based upon altered blood cell count in Bell’s palsy, treatment is highly recommended to commence within 72 hours. The study presents no such treatment to achieve dramatic and rapid changes in

white blood cell count. In a hematological perspective, these changes may be attributable to the effects of treatment (glucocorticoids) rather than the disease itself. The authors’ not finding any relation between the severity of paralysis with the cell ratios, also support my assessment.

Furthermore, in retrospective studies, the countenance and reliability of factors, which may confound the main finding, are not easily managed. As stated as a retrospective study, derivation of the data leaves an obscure sensation in the reader’s mind.

In conclusion, I believe that this study, as presented to contribute to the literature with new findings should be considered under the information I have mentioned above.

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Informed Consent: N/A.

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