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HIGHER NEUTROPHIL COUNTS BEFORE THROMBOLYSIS FOR CEREBRAL ISCHEMIA PREDICT WORSE OUTCOMES

Wusheng Zhu, Zhiliang Guo, Shuhong Yu, Nanjing, China: We read with interest the article by Maestrini et al.,¹ which provided evidence that higher neutrophil counts and neutrophil to lymphocyte ratio (NLR) at baseline are independently associated with symptomatic intracerebral hemorrhages (sICH) and worse outcome at 3 months.

In this study, the neutrophil count was higher in patients who developed sICH, or who died within 3 months, and lower in patients with modified Rankin Scale (mRS) 0–1 at 3 months and mRS 0–2 at 3 months.¹ Similarly, the leukocyte count was higher in patients who died at 3 months, and tended to be lower in patients with mRS 0–1 and mRS 0–2 at 3 months. However, the best predictive values for the 4 outcome measures were found with the NLR, which is the ratio of the neutrophil count over the lymphocyte count, but not the product of neutrophil count and lymphocyte count.

Why might differences exist in the predictive values of neutrophil and NLR? Also, an explanation for why the predictive values of NLR are better than that of neutrophils could not be found in this study.

Author Response: Didier Leys, Lille, France; Ilaria Maestrini, Rome; Solène Moulin, Lille, France; Turgut Tatlisumak, Gothenburg, Sweden; Régis

Bordet, Lille, France: We thank Zhu et al. for their comments on our article.¹ Our study evaluated mechanisms and molecular level interactions. The underlying mechanisms were potentially important but more data are needed. The reasons why a higher neutrophil count was associated with worse outcomes could be that (1) the higher the neutrophil count in acute cerebral ischemia, the higher the release of deleterious factors such as matrix metalloproteinase 9,² and (2) severe ischemic strokes are associated with a more severe systemic inflammatory response³ that could include an early release of neutrophils even within the first 4.5 hours. To determine if these 2 hypotheses are correct, we are currently evaluating the kinetics of neutrophils within the first 4.5 hours and identifying mediators of this effect.

The reason why the NLR is a better predictor of outcome than the neutrophil or leukocyte counts could be that the influence of lymphocytes takes more time and is low at this very early stage. Any normalization with a parameter that is not modified leads to an amplification of the effect. Therefore, the ratio amplifies the effect while the sum dilutes the effect, explaining a better accuracy to predict outcome.

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CORRECTIONS

Hepcidin ameliorates mitochondrial damage in a rat model of Parkinson's disease (P3.019)

The abstract "Hepcidin ameliorates mitochondrial damage in a rat model of Parkinson's disease (P3.019)" by T. Liang et al. (*Neurology* 2015;84:P3.019) should not have appeared in the supplement, as it was withdrawn by the authors before the publication deadline. The abstract vendor regrets the error.

Mutations in *HSPB8* causing a new phenotype of distal myopathy and motor neuropathy

In the article "Mutations in *HSPB8* causing a new phenotype of distal myopathy and motor neuropathy" by R. Ghaoui et al. (*Neurology* 2016;86:391–398), there is an error in the Results section. The mutation should have been written "c.515insC" rather than "c.151insC" as originally published. This error did not affect the amino acid frameshift change or effect on the protein, which were both described correctly in the manuscript. The authors regret the error.

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**Hepcidin ameliorates mitochondrial damage in a rat model of Parkinson's disease
(P3.019)**

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