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# Publisher Correction: Drug-resistant epilepsy associated with peripheral complement decreases and sex-specific cytokine imbalances: a pilot study

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In the original version of this Article, Figures 3 and 4 were switched.

As a result, in the Results section, under the subheading ‘Dysregulation of complement pathways in DRE’,

“We further analyzed these molecular differences to elucidate potential functional defects within the complement cascade (Fig. 4, Supplementary Figs. 1–4).”

now reads:

“We further analyzed these molecular differences to elucidate potential functional defects within the complement cascade (Fig. 3, Supplementary Figs. 1–4).”

In addition,

“In healthy individuals (Fig. 4A, C), we observed high positive correlations between classical (C1q to C3b/iC3b; females,  $r = 0.72, p < 0.001$ ; males,  $r = 0.89, p < 0.001$ ),”

now reads:

“In healthy individuals (Fig. 3A, C), we observed high positive correlations between classical (C1q to C3b/iC3b; females,  $r = 0.72, p < 0.001$ ; males,  $r = 0.89, p < 0.001$ ),”

And

“However, DRE females showed no evidence of a linear association between levels of MBL and C3b/iC3b (Fig. 4J), suggesting selective disruption of lectin pathway coordination. In contrast, male DRE patients exhibited broader pathway disruption, with a loss of normal correlations between complement components in both classical (Fig. 4H) and lectin pathways (Fig. 4L). While positive correlations between C3b/iC3b and C5a remained intact across all experimental groups (Fig. 4M–P),”

now reads,

“However, DRE females showed no evidence of a linear association between levels of MBL and C3b/iC3b (Fig. 3J), suggesting selective disruption of lectin pathway coordination. In contrast, male DRE patients exhibited broader pathway disruption, with a loss of normal correlations between complement components in both classical (Fig. 3H) and lectin pathways (Fig. 3L). While positive correlations between C3b/iC3b and C5a remained intact across all experimental groups (Fig. 3M–P),”

Furthermore, under the subheading ‘Cytokine serum levels in health and DRE’

“We investigated the association between the concentrations of complement components and cytokines in serum (Figs. 3 and 5; Supplementary Figs. 1–5). Our findings revealed distinct cytokine profile patterns between healthy individuals and DRE patients (Fig. 3A), as well as between males and females in both healthy (Fig. 3B) and DRE groups (Fig. 3C, D) (Supplementary Tables 1 and 2). We observed that the DRE group exhibited lower serum IL-8 levels ( $p = 0.001$ ) and higher CCL2 ( $p = 0.03$ ) and CCL5 ( $p = 0.009$ ) levels compared to the healthy group (Fig. 3A).”

now reads,

“We investigated the association between the concentrations of complement components and cytokines in serum (Figs. 4 and 5; Supplementary Figs. 1–5). Our findings revealed distinct cytokine profile patterns between healthy individuals and DRE patients (Fig. 4A), as well as between males and females in both healthy (Fig. 4B) and DRE groups (Fig. 4C, D) (Supplementary Tables 1 and 2). We observed that the DRE group exhibited lower serum IL-8 levels ( $p = 0.001$ ) and higher CCL2 ( $p = 0.03$ ) and CCL5 ( $p = 0.009$ ) levels compared to the healthy group (Fig. 4A).”

Finally, in the Discussion section,

“Within the DRE population, we observed a general reduction in the serum levels of multiple complement analytes (C1q, Factor B, C4, C4b, and Factor H) (Fig. 3) along with common increases in bFGF (Fig. 3). Additionally, we found sex-specific differences in both the levels and coordination between complement components and cytokines (Figs. 4, 3 and 5) in healthy individuals and DRE patients.”

now reads,

“Within the DRE population, we observed a general reduction in the serum levels of multiple complement analytes (C1q, Factor B, C4, C4b, and Factor H) (Fig. 4) along with common increases in bFGF (Fig. 3). Additionally, we found sex-specific differences in both the levels and coordination between complement components and cytokines (Figs. 3, 4 and 5) in healthy individuals and DRE patients.”

In addition,

“Our novel findings suggest a more severe complement system dysregulation in males with epilepsy (Fig. 4 and Supplementary Fig. 4).”

now reads,

“Our novel findings suggest a more severe complement system dysregulation in males with epilepsy (Fig. 3 and Supplementary Fig. 4).”

And

“Our study revealed common alterations in all DRE cases, including lower complement levels and detectable bFGF (Fig. 4 and Supplementary Figs. 5–6).”

The original version of this Article has been corrected.

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