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LETTER TO THE EDITOR

Letter to the Editor concerning "Is intervertebral disc degeneration associated with reduction in serum ferritin?" by Guo et al. (Eur Spine J [2022]: https://doi.org/10.1007/s00586-022-07361-1)

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To the Editor,

We read with interest Guo et al.'s study [1] which concluded that serum ferritin (SF) correlated with intervertebral disc degeneration (IDD) severity. The findings of this study are significant as they shed light on the potential role of SF in the development of IDD. The study design including the large sample size and comprehensive analysis of serum iron metabolism markers, added to the robustness of the findings. While we fully support that SF and IDD are associated, we have some concerns regarding the validity of the results.

First, the authors reported a significant correlation between serum ferritin and gender. Was a study conducted separately for men and women? As ferritin is generally 2–3 times higher in men than in women [2], would mixing the sexes affect the study results?

Second, previous have reported on the aging effect on serum iron and serum ferritin [2, 3]. Moreover, Aiguo et al. reported that the median serum ferritin concentration at age 65–70 years was about twice that at age 45–50 years in healthy women in Qingdao [3]. To examine the effect of age on serum ferritin levels, were different age groups investigated in this study?

Third, the Pfirrmann Grade (1–5) was used as the cumulative severity grade of IDD, considering the sum of the grade of 5 intervertebral spaces. It may be necessary to quantify degeneration across the entire lumbar spine. Moreover, if degeneration occurs only in the short intervertebral spine (e.g., advanced disc degeneration in L4/5), the severity may be underestimated.

Finally, previous studies have implicated periostin and metalloproteinases (MMPs) in disc degeneration, in addition to ferritin [4]. Thus, further investigations, taking these factors into account, would enhance this study.

We would appreciate your comments on these concerns, so we can further corroborate the results of this important study.

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