

## Correspondence

### Comment on: Hemochromatosis (HFE) gene mutations (H63D and C282Y) and iron overload in beta-thalassemia major

To the Editor

We read with interest the study reported by Sharif et al.<sup>1</sup> They concluded that “H63D polymorphism is associated with iron overload in BTM patients.”<sup>1</sup> Indeed, there are several factors that relate to the iron overload in BTM patients. There are also other underlying genetic factors that might superimpose the iron overload. The concurrent hemoglobin E disorder is a good example.<sup>2</sup> In addition to genetic factors, the iron overload might be affected by basic thalassemia therapy including polytransfusion treatment and its accompanied chelation therapy.<sup>3</sup> Those factors have to be controlled and recognized before conclusion of the effect of the HFE polymorphisms. Nevertheless, if we focus on HFE polymorphism as a single factor regardless of other possible confounding factors, the basic molecular change due to each HFE polymorphism can well explain the observation by Sharif et al.<sup>1</sup> Based on the quantum molecular weight calculation as presented in the previous referencing publications,<sup>4,5</sup> the molecular weight changes HFE H63D and C282Y are  $\leq 22$  and  $+60$  g/Mol, respectively. The decreased molecular weight in H63D is contrast to increased molecular weight in C282Y and it can be a clue for explanation of the observed increased chance for iron overload in H63D.

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Reply from the Author

Thanks for your interest in our article. In the methods section, we mentioned that the patients having any other hemoglobinopathy disorder (such as HbE) were excluded from the study. There are also other factors other than genetics such as polytransfusion treatment that cause iron overload. We mentioned this, in the introduction and in the last paragraph of the discussion, and this factor is much difficult to be controlled in thalassemia major patients.

Molecular weight changes may increase the chance for iron overload in H63D (as mentioned in correspondence) but, it is out of the scope of our study. We thank you for your valuable discussion/comments.

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## References

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