Reply

to the Letter of Eleftheriadis et al.

Shih-Ping Hsu^{a,b,c} Chih-Kang Chiang^{a,b} Chiang-Ting Chien^c Kuan-Yu Hung^{a,b}

^aDepartment of Internal Medicine, Far Eastern Memorial Hospital, and Departments of ^bInternal Medicine and

^cClinical Research, National Taiwan University Hospital, Taipei, Taiwan

Sir,

We are pleased to know that not only our group [1], but also other teams are interested in studying the relationships between plasma hepcidin (prohepcidin) levels and anemia in hemodialysis (HD) patients [2, 3]. However, there are apparently some discrepancies in the findings and interpretations among the studies.

Eleftheriadis et al. [2] stated they found that serum prohepcidin levels were negatively correlated with hematocrit (Hct) in their HD patients, compatible with the findings reported by Małyszko et al. [3]. Furthermore, they concluded that prohepcidin was the major and negative determinant of Hct. On the other hand, our group has found a positive correlation between plasma prohepcidin levels and Hct, suggesting prohepcidin expression might be positively regulated by Hct [1]. Kulaksiz et al. [4] have also found that dialysis patients without renal anemia have higher levels of plasma prohepcidin than those in the patients with renal anemia.

Indeed, many studies have proposed that hepcidin inhibits intestinal iron absorption and iron release from macrophages, and causes anemia of chronic disease (ACD) with low transferrin saturations and high ferritin levels. However, it would not be the case in renal anemia. Compatible with the findings reported by

Eleftheriadis et al. [2], we failed to find any significant correlation between plasma prohepcidin levels and iron profiles in HD patients. The possible explanations have been stated in our article [1]. Moreover, Nicolas et al. [5] reported in their experimental study that anemia suppresses the expression of hepcidin, indicating that low Hct would suppress the expression of prohepcidin in a feedback manner. Therefore, it is reasonable that there is a positive correlation between Hct and prohepcidin levels in HD patients.

We agree the major limitation in studying the role of hepcidin in renal anemia in HD patients is the lack of a feasible, clinical method to detect plasma levels of hepcidin rather than prohepcidin. Before further conclusive results can be proposed concerning the relationship between plasma hepcidin (prohepcidin) levels and anemia in HD patients, it is mandatory to first clarify the relationship between plasma hepcidin and prohepcidin levels in HD patients.

References

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Shih-Ping Hsu, MD
Department of Internal Medicine
Far Eastern Memorial Hospital, No. 21, Sec. 2
Nan-Ya South Road, Pan-Chiao
Taipei (Taiwan)
Tel. +886 2 8966 7000, ext. 1164
Fax +886 2 8966 5567
E-Mail shihping99@sina.com.tw