

# Insulin-like growth factor-1 and zinc

*İnsülin benzeri büyüme faktörü-1 ve çinko*

## Letter to the Editor

I read the recent paper on "Insulin-like growth factor-1 in children with Beta thalassemia minor" by Karamifar et al (Turk J Hematol. 2008; 25(3): 136-139) with great interest. They stated that IGF-1 levels are decreased in Iranian beta thalassemia minor children. They concluded that some etiologies other than those described to date for growth retardation in beta thalassemia major may exist [1].

However they missed an important factor which was previously reported: that is zinc deficiency. Growth retardation is a common problem in beta thalassemia patients. There are many contributing factors including chronic zinc deficiency. Further zinc supplementation effected linear growth positively [2]. Our group previously reported that zinc deficiency may affect the generation of somatomedin-C which in turn named as Insulin growth factor-1 (IGF-1 ) Decreased IGF-1 levels were reported by us and others in beta thalassemia major patients [3]. IGF-1 mediates growth by contributing to the effect of growth hormone and requires Zn to be synthesized in liver [4].

Moreover; marginal zinc deficiency with nutritional background, may have effect on the decreased synthesis of IGF-1. Nutritional Zn deficiency is a common problem in Iranian population as previously reported [5]. Karamifar et al.'s data should be analyzed accordingly.

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## References

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## Author Reply

Regarding the letter to the editor written by professor Nejat Akar, I would like to mention the following. Serum IGF1 concentrations may be affected by variety of conditions [1], including zinc deficiency. Zinc deficiency syndrome has been reported initially from Shiraz [2] and most of our physicians are expert in diagnosis of clinical zinc deficiency. Although milder reduction of plasma zinc may be observed in certain individuals without clinical significance. In our study there was no clinical indication for zinc measurement, because of most our patients were on dietary supplement.

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