Serum Ferritin Levels in Carriers of β -Thalassaemia Trait

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We read with interest the article by Zia Qureshi et al. [1] titled 'Serum ferritin levels in carriers of β -thalassaemia trait'.

β -Thalassaemia trait (BTT) is a frequently encountered condition in India also and as the authors observe, frequently coexists with iron deficiency (ID). We have investigated 463 cases of BTT (126 with ID and 337 without ID). ID was diagnosed on the basis of transferrin saturation less than 16% and/or serum ferritin less than 16 $\mu\text{g/dl}$ [2, 3].

Two hundred and forty-one of 337 (71.5%) BTT cases without ID were anaemic as compared to 114 of 126 (90.4%) BTT cases with ID. This difference was highly significant ($p < 0.002$). Mean haemoglobin concentration was significantly lower ($p < 0.0001$) in β -thalassaemics with ID ($10.7 \pm 1.5 \text{ g/dl}$) as compared to those without ID ($11.6 \pm 1.6 \text{ g/dl}$). Mean MCV was also lower in traits with ID than in those without ID. Mean MCH showed a similar pattern being 19.6 (± 2.1) pg and 20.6 (± 3.61) pg in the two groups, respectively. Both these differences were highly significant ($p < 0.0001$).

Serum ferritin was estimated in 233/463 patients by ELISA technique. It was reduced in 82 (35.2%) patients, normal in 145 (62.2%) subjects and elevated in only 6 (2.6%) patients with BTT.

The prevalence of ID in BTT in this population of Northern India was 27.2%. The effect of ID in BTT was apparent with significant lowering of haemoglobin concentration and increased prevalence of anaemia. Therapy with iron is likely to raise the haemoglobin concentration significantly. We, therefore, agree with the authors that assessment of iron status in β -thalassaemics would assist in decisions regarding therapy with iron.

References

- Zia Qureshi T, Anwar M, Ahmed S, Ahmed Khan D, Saleem M: Serum ferritin levels in carriers of β -thalassaemia trait. *Acta Haematol* 1995;94:7-9.
- Hallberg L, Bengtsson C, Lapidus C: Screening for iron deficiency: An analysis based on bone marrow examinations and serum ferritin determinations in a population sample of women. *Br J Haematol* 1993;85:787-798.
- DeMaeyer EM: Preventing and Controlling Iron Deficiency Anaemia through Primary Health Care. Geneva, WHO, 1989.

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