About Copper Deficiency

I have read with interest the article by Ruocco et al. [1] entitled 'Severe Pancytopenia due to Copper Deficiency' in Acta haematologica. Copper deficiency is seen relatively more often in infants, in addition to other conditions described in the introduction of the authors' article [2]. In infants hypocupremia usually goes together with hypoferremia, hypoproteinemia (hypoalbuminemia). osteoporosis, long changes, hypotonia, depigmentation of the skin and hair [3, 4]. Familial benign copper deficiency has also been reported [5]. In the authors' patient normal serum iron level was found to be decreased following copper sulfate treatment. This does not fit the theory of decreased iron mobilization from liver and the reticuloendothelial system because of low ceruloplasmin level in copper deficiency.

In the introduction of the article Wilson's disease was mentioned among the genetic abnormalities causing copper deficiency. I believe the authors meant hypocupremia which may be observed in Wilson's disease; we have shown that serum copper level usually does not reflect tissue copper concentrations [6].

References

- 1 Ruocco, L.; Buldi, A.; Cecconi, N.; Marini, A.; Azzare, A.; Ambrogi, F.; Grassi, B.: Severe pancytopenia due to copper deficiency. Acta haemat. 76: 224-226 (1986).
- 2 Schubert, W.K.; Lahey, M.E.: Copper and protein depletion complicating hypoferremic anemia of infancy. Pediatrics 24: 710-733 (1959).
- 3 Ashkenazi, A.; Levin, S.; Djaldetti, M.; Fishel, E.; Benvenisti, D.: The syndrome of neonatal copper deficiency. Pediatrics 52: 525-528 (1973).
- 4 Levy, Y.; Zeharia, A.; Grunebaum, M.; Nitzan, M.; Steinherz, R.: Copper deficiency in infants fed cow milk. J. Pediat. 106: 786-788 (1985).
- 5 Mehes, K.; Petrovicz, E.: Familial benign copper deficiency. Archs Dis. Childh. *57*: 716-718 (1982).
- 6 Göksu, N.; Özsoylu, Ş.: Hepatic and serum levels of zinc copper and magnesium in childhood cirrhosis. J. pediatr. Gastroent. Nutr. 5: 459-462 (1986).

Accepted: July 31, 1987

Prof. Şinasi Özsoylu, MD Department of Pediatrics, Hematology Unit Faculty of Medicine, Hacettepe University Ankara 06100 (Turkey)