Splenectomized versus non-splenectomized patients with thalassemia major. Echocardiographic comparison

To the Editor

I read the interesting article by Morsy et al¹ on the splenectomized versus non-splenectomized patients with thalassemia major: echocardiographic comparison. The authors accomplished a good work with invaluable effort in assessing cardiac homodynamic changes in both splenectomized and non-splenectomized patients with thalassemia major. It is well known that splenectomy is beneficial for children with thalassemia and hypersplenism as it reduces their transfusion requirements² and improves their quality of life.³ The authors concluded that no statistically significant gender difference was noted between splenectomized and non-splenectomized beta thalassemics regarding their anthropometric indices of weight and height. They did not give any speculation for that observation. Two important factors determine the required speculation, namely, the number of patients recruited in the aforementioned study, which was small (21 patients), and the ages of the patients when they were splenectomized, which the authors did not exactly state. In a Thai study,⁴ the growth indices were assessed 2 years postsplenectomy in 69 children with betathalassemia/E disease, hemoglobin H disease, and betathalassemia major. The study showed that the growth velocity in height kept up with their postsplenectomy period in hemoglobin H and beta-thalassemia major (except 2 cases). In addition, the growth in weight kept up with their pre splenectomy period in 40/49 cases (81.6%) in beta-thalassemia/hemoglobin E. To date, no long-term follow-up data are available to allow conclusions regarding the foreseeable pattern of growth of splenectomized beta thalassemic children, and this remains a challenge to be confronted.

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Reply from the Author

We thank Dr. Al-Mandalawi for his comments. He is concerned with the anthropometric indices, namely, height and weight in our patients. In our study, although the means of height and weight in both groups did not reach a statistical significance; they are higher in the splenectomized group. In patients with thalassemia, anthropometric indices do not depend on splenectomy alone. There are many other factors that may affect thalassemia patient's growth. Chronic hypoxemia, iron overload,^{5,6} growth hormone and gonadotropin secretion,⁷ thyroid function,⁸ different treatment regimens,⁹ and nutritional status of the patients¹⁰ are examples of these factors. We want to emphasize that our study focused only on hemodynamic changes after splenectomy, and the study of anthropometric indices was out of the scope of this study. Study of these anthropometric indices accurately, needs a different type of study with a longitudinal, not cross-sectional design, considering the multiple factors affecting these indices.

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References

- 1. Morsy MMF, Alnajjar AA, Almuzainy IS, Alhawsawi ZM, Alserafi MH, Ahmed AA. Splenectomized versus non-splenectomized patients with thalassemia major: Echocardiographic comparison. *Saudi Med J* 2008; 29: 1310-1314.
- 2. Al-Salem AH, Nasserulla Z. Splenectomy for children with thalassemia. *Int Surg* 2002; 87: 269-273.
- Poddubnyi IV, Tolstov KN, Isaev AA, Iatsenko EA, Doniush EK, Kozlov MIu. Life quality of children with hematological diseases after laparoscopic splenectomy. *Khirurgiia (Mosk)* 2007; 7: 41-44.
- 4. Hathirat P, Isarangkura P, Numhom S, Opasathien P, Chuansumrit A. Results of the splenectomy in children with thalassemia. *J Med Assoc Thai* 1989; 72: 133-138.
- Huang YL, Liu S, Xia T, Hao WG, Liang W, Sun X. Relationship between growth disorders and iron overload in children with beta-thalassemia major. *Zhongguo Dang Dai Er Ke Za Zhi* 2008; 10: 603-606.
- George A, Bhaduri A, Sen S, Choudhry VP. Physical growth parameters in thalassemic children. *Indian J Pediatr* 1997; 64: 861-871.
- Moayeri H, Oloomi Z. Prevalence of growth and puberty failure with respect to growth hormone and gonadotropins secretion in beta-thalassemia major. *Arch Iran Med* 2006; 9: 329-334.
- Jain M, Sinha RS, Chellani H, Anand NK. Assessment of thyroid functions and its role in body growth in thalassemia major. *Indian Pediatr* 1995; 32: 213-219.
- Viprakasit V, Tanphaichitr VS, Mahasandana C, Assteerawatt A, Suwantol L, Veerakul G, et al. Linear growth in homozygous beta-thalassemia and beta-thalassemia/hemoglobin E patients under different treatment regimens. *J Med Assoc Thai* 2001; 84: 929-941.
- Tienboon P, Sanguansermsri T, Fuchs GJ. Malnutrition and growth abnormalities in children with beta thalassemia major. *Southeast Asian J Trop Med Public Health* 1996; 27: 356-361.