Correspondence

Splenectomized versus non-splenectomized thalassemia patients with thalassemia major

To the Editor

I read with interest the article by Morsy et al[1] on echocardiography in splenectomized versus non-splenectomized thalassemia patients. I have a few comments on their conclusion regarding diastolic dysfunction in their patients, in particular the statement "the mitral valve ratio of transmitral peak velocity of early and late diastolic flow (E/A) was significantly higher, indicating diastolic dysfunction, in splenectomized than in non-splenectomized patients". Firstly, this statistically significant difference is not clinically significant, since both values (1.4 and 1.6) are within normal range.[2] Second, using the mitral valve E/A ratio alone to diagnose diastolic dysfunction is an over-simplification of a complex entity. The E/A ratio decreases in the early phase of diastolic dysfunction, then rises again to normal values with advancing dysfunction (pseudo-normalization), and rises further above normal in more advanced cases. The E/A ratio alone cannot tell whether the patient has normal diastolic function or a pseudo-normal pattern of more advanced dysfunction. Other parameters within the mitral valve inflow such as deceleration time are used, or even better, other echocardiography parameters such as pulmonary vein Doppler, tissue Doppler, or color M-mode flow propagation velocity have to be used to further characterize the diastolic function. I agree with the authors that these patients are at risk of having diastolic dysfunction, however, the tools the authors used fall short of proving that these patients actually have diastolic dysfunction.

Zakariya Hubail
Department of Pediatrics
Salmaniya Medical Complex
Arabian Gulf University
Bahrain

Reply from the Author

We thank Dr. Hubail for his valuable comments. He suggested the use of many other parameters to evaluate the diastolic function of the left ventricle. We agree with him regarding the limitations of E/A ratio as a sole tool for evaluating left ventricle function, but also we consider it as the standard tool. This parameter has the least inter-reader variability. Other tools, although useful, have their limitations and difficulties. Despite great technical progress, visualization of pulmonary veins by transthoracic echocardiography is often hard, depending on many factors including the anatomy of the heart, clinical settings, and the skill of the echocardiographer. On the other hand, tissue Doppler imaging (TDI) of the mitral valve annulus can be carried out even in patients with poor echocardiographic window. The TDI has a potential limitation in that measurements may be unreliable in patients with arrhythmia, and in those with left ventricular regional motional abnormalities. Color M mode Doppler was first applied to measure propagation velocity into the left ventricle as an index of left ventricle relaxation and was shown to be relatively preload insensitive. We mentioned in our paper, that our study is limited by being a cross sectional study, which may affect study of some parameters. We are now conducting a longitudinal study on the same patients with more detailed parameters that, we think, will be more useful in study of such patients.

Mohamed-Mofeed F. Morsy
Department of Pediatrics
Sohag Faculty of Medicine
Sohag University
Sohag, Egypt

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