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Cardiovascular Imaging in Thalassemia: An Issue With Limited Data

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Dear Editor,

Thalassemia is an important congenital hereditary disorder that is highly endemic in Southeast Asia (1). Patients with thalassemia usually suffer from fragile red blood cells and severe anemia. Blood transfusion is usually required, and long-term transfusion can result in excessive iron accumulation in several organs including the cardiovascular system (2). The cardiovascular problem in patients with thalassemia is an intriguing issue. However, there are only a few reports on cardiovascular imaging among thalassemic patients. According to Peng et al. (3) iron cardiomyopathy is a significant problem in thalassemic patients; magnetic resonance imaging and echocardiography can be used to assess such patients but reliability is the major problem. Nevertheless, it is hard to access advanced imaging technology in real clinical practice given that many patients live in poor settings such as rural communities in Southeast Asia, South Asia, and South America. Based on PubMed search, there are few reports on cardiovascular imaging in thalassemia. Magnetic resonance T2 * imaging is reported in some publications. Djer et al. (4) reported an observation on the correlation between T2 * cardiovascular magnetic resonance (CMR) and left ventricular function and mass in adolescent and adult major thalassemia patients with iron overload and concluded that myocardial conduction time by T2 * CMR has a moderate positive correlation with diastolic function and moderate negative correlation with serum ferritin, but not with left ventricular mass index and systolic function. A study conducted by He (5) concluded that magnetic resonance T2 * imaging is useful for the assessment of iron overload among thalassemic patients. Indubitably, imaging modalities can be useful in the diagnosis of cardiac pathology due to iron overload. Nonetheless, the question remains as to its effectiveness in the follow-up of such patients. Recently, Baksi and Pennell (6) reported that the use of magnetic resonance T2 * imaging might be limited at follow-up. Additionally, Akcay et al. (7) reported no relationship between magnetic resonance T2* imaging and the markers used in the follow-up of patients with thalassemia. Cardiovascular imaging in patients with thalassemia can be fertile ground for further research in cardiovascular imaging medicine.

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