A 20-year-old man from Mozambique was admitted for dyspnea. His physical exam showed orthopnea, hepatomegaly and hepatalgia. His blood pressure was 100/70mmHg and heart rate 102bpm. His cardiac auscultation revealed a regular gallop rhythm due to the presence of a third heart sound, a systolic murmur and diastolic rumble.

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Transthoracic echocardiography showed 2 distinct abnormalities: severe mitral stenosis and lesions consistent with advanced right sided endomyocardial fibrosis. The mitral valve had the typical appearance of rheumatic heart valve disease: bicommissural fusion, leaflet thickening being more pronounced at the tips with relative sparing of the midportion resulting in restriction of both leaflets and thickening and shortening of the chordae (Figure 1A). Mitral regurgitation and stenosis were severe with a mean transmitral gradient of 22mmHg and a mitral valve area by planimetry of 0.5cm² (Figure 1B, Video 1).

On the other hand, the right ventricle yielded characteristic abnormalities of tropical endomyocardial fibrosis with obliteration and retraction of the apex (Figures 1C and 1D, Video 2) and severe bialtrial dilatation. Tricuspid regurgitation was deemed moderate with moderately thickened leaflets. The pulmonary arterial systolic pressure was estimated as 45mmHg.

Cardiac surgery was undertaken, including mechanical mitral valve replacement associated with right ventricular endarterectomy. Intra-operative findings confirmed the absence of endomyocardial fibrosis of the left ventricle with a typical aspect of rheumatic mitral valve.

In Africa, rheumatic heart disease remains the main differential diagnosis of tropical endomyocardial fibrosis which has quite different echocardiographic lesions.(1,2) The association of rheumatic heart disease and tropical endomyocardial fibrosis is rare, but not an exceptional situation in endemic areas for these 2 diseases. That is why some authors have implicated rheumatic heart disease as a potential cause of tropical endomyocardial fibrosis.(3) Nevertheless, the ubiquity of rheumatic heart disease compared to tropical endomyocardial fibrosis confinement in some parts of the world, argues against this hypothesis.(4,5)

In our 10 years’ experience we, the surgical staff at the Heart Institute of Maputo in Mozambique, have reported 23 patients with this association (unpublished data). Is that still a fortuitous association?

Conflict of interest: none declared.

REFERENCES

VIDEO 1: Colour Doppler 2D echocardiogram in apical 4 chamber view showing severe mitral regurgitation and stenosis. The base of the anterior leaflet remains mobile, while the tip is calcified and thick.

VIDEO 2: 2D echocardiogram in 4 chamber view. There is severe remodeling of the right ventricle which is retracted and partially obliterated by fibrosis. The movement of tricuspid leaflets is limited by retraction of tricuspid cordage into fibrosis. We note a significant coaptation defect resulting in a severe regurgitation. Both auricles are dilated and with sludge.