Spectrum of left atrial thrombus in rheumatic heart disease

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DESCRIPTION

We describe six patients with rheumatic heart disease involving mitral valve with predominant mitral stenosis. Figures 1–6 and videos 1–6 show the spectrum of left atrial thrombus in rheumatic heart disease. All patients had severe mitral stenosis with functional class III symptoms. All patients had atrial fibrillation. The patient in figure 1 (video 1) had left atrial appendage (LAA) thrombus. This patient underwent successful balloon mitral valvotomy (BMV). The patient in figure 2 (video 2) had LAA thrombus protruding into the left atrial cavity. This patient did well after BMV. The patient in figure 3 (video 3) had thrombus in the left atrial roof but above the plane of fossa ovalis with a good result of BMV. Figure 4 (video 4) shows

Figure 3 Transoesophageal echocardiogram 0° view (4 chamber) showing thrombus in the left atrial roof but above the plane of fossa ovalis.

Figure 1 Transoesophageal echocardiogram 180° view (4 chamber) showing thrombus in the left atrial appendage.

Figure 4 Transthoracic echocardiogram apical four-chamber view showing the thrombus attached to the left atrial roof but extending below the plane of fossa ovalis.

Figure 2 Transoesophageal echocardiogram 40° view (aortic short axis) showing thrombus in the left atrial appendage protruding into the left atrial cavity.

Figure 5 Transthoracic echocardiogram short axis view showing thrombus in the left atrial and in the left atrial appendage.

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Figure 6 Transthoracic echocardiogram apical four-chamber view showing large thrombus in the left atrial (LA) filling most of the LA.

Video 1 Transoesophageal echocardiogram 180° view (4 chamber) showing thrombus in the left atrial appendage.

Video 2 Transoesophageal echocardiogram 40° view (aortic short axis) showing thrombus in the left atrial appendage protruding into the left atrial cavity.

Video 3 Transoesophageal echocardiogram 0° view (4 chamber) showing thrombus in the left atrial roof but above the plane of fossa ovalis.

thrombus attached to the roof of the left atrium but reaching below the plane of fossa ovalis. In addition this thrombus had an echolucent centre which gives a clue to the duration of the thrombus, that is, new onset. **Figure 5** (video 5) shows thrombus

Video 4 Transthoracic echocardiogram apical four-chamber view showing the thrombus attached to the left atrial roof but extending below the plane of fossa ovalis.

Video 5 Transthoracic echocardiogram short axis view showing thrombus in the left atrial and in the left atrial appendage.

Video 6 Transthoracic echocardiogram apical four-chamber view showing large thrombus in the left atrial (LA) filling most of the LA.

in the left atrium as well as LAA. **Figure 6** (video 6) shows thrombus filling almost full of the left atrium. All three patients shown in **figures 4–6** underwent surgical management. We can classify¹ the thrombus in the left atrium as Ia (thrombus confined to LAA), Ib (thrombus in LAA and protruding into LA cavity), IIa (attached to LA roof but above the plane of fossa ovalis), IIb (reaching below plane of fossa ovalis), III (attached to interatrial septum), IV (mobile with attachment to roof or lateral wall) and V (ball valve thrombus). Types Ia, Ib and IIa can undergo BMV by using modified over the wire technique.² Traditionally, LA thrombus was a contraindication for BMV but it can be carried out in the above scenarios of thrombus with almost 100% success in the hands of experienced operators. Rheumatic heart disease is a constant burden in developing countries. The most commonly seen lesion is mitral stenosis. Victims are mostly women. Adding to this is the burden of left

atrial thrombus in the rheumatic mitral stenosis, which significantly alters the management.

Learning points

- ▶ Rheumatic heart disease with mitral stenosis can lead to the formation of thrombus formation. Atrial fibrillation adds to the risk.
- ▶ Classifying the thrombus according to the location can be a useful guide to management strategy.
- ▶ In selected cases of thrombus in the left atrium or appendage, valvotomy can be carried out safely by over-the-wire technique.

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