Ockham’s razor or Hickam’s dictum: a right atrial mass following excision of left atrial myxoma

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We report a case of a 54-year-old man presenting with a right atrial mass 7 months after undergoing a left atrial myxoma excision surgery. The differential diagnosis included recurrent myxoma or thrombus. The patient underwent repeat open sternotomy on cardiopulmonary bypass. Histopathological evaluation of the mass revealed an organizing thrombus. This report is, to our knowledge, the first that demonstrates right atrial thrombus shortly following excision of left atrial myxoma.

KEYWORDS
Atrial myxoma; Thrombus; Excision; Atrial mass

Case report

A 54-year-old man presented to our hospital with an episode of syncope on exertion. During the 6 weeks prior to admission he suffered from progressive exertional dyspnea. On physical examination, a 2/6 systolic murmur was heard at the left sternal border, with a fixed split S2. ECG and chest X-ray were unremarkable, and the patient was admitted for further evaluation. Transthoracic echocardiography revealed a large pedunculated mobile mass measuring 44 × 55 mm, attached to the interatrial septum with prolapse into the left ventricular cavity during diastole (Figure 1). This finding was consistent with a large left atrial myxoma. Transesophageal echocardiography performed prior to surgical excision revealed a multilobulated left atrial mass protruding into the left ventricle cavity and creating a sub-total obstruction of the mitral valve during diastole (Figures 2 and 3). A fully animated version of Figures 2 and 3 can be viewed in the Supplementary material (Movies I and II). The mass was removed via open sternotomy on cardiopulmonary bypass (Figure 4) and histology was consistent with the diagnosis of myxoma.

Seven months later, the patient underwent a routine transthoracic echo as follow-up after removal of the myxoma, which revealed a mobile echodensity in the body of the right atrium. Transesophageal echocardiography was performed and revealed a pedunculated mobile mass measuring 31 × 44 mm, attached near the entrance of the inferior vena-cava and extending to the body of the right atrium (Figure 5, Supplementary material online, Movie III). The differential diagnosis included recurrent myxoma or thrombus. The patient was treated with anticoagulation for 3 months. Repeat transesophageal echocardiography was performed and demonstrated no change in the right atrial mass. Owing to the clinical suspicion of recurrent myxoma, the patient underwent repeat open sternotomy on cardiopulmonary bypass. Histopathological evaluation of the mass revealed an organizing thrombus.

Discussion

This report is, to our knowledge, the first that demonstrates right atrial thrombus shortly following excision of left atrial myxoma. Cardiac myxomas usually occur sporadically, but recurrent cases have been described from as soon as few months to as long as 8 years after excision of the myxoma with reported recurrence rate ranging from 5 to 14%.1 Thrombus formation in the right atrium after cardiac surgery is extremely unusual and presumably because of local factors related to cannulation of the right atrium during cardiopulmonary bypass.2 While the principle of diagnostic parsimony as exemplified by Ockham’s razor, a principle attributed to William of Ockham (fourteenth century) stating ‘entities should not be multiplied beyond necessity’,
supported a diagnosis of recurrent myxoma in this case, the final diagnosis of thrombus supports Hickam’s dictum, a principle attributed to Dr John Hickam (twenty-first century) stating ‘Patients can have as many diseases as they damn well please’, that the patient can have as many illnesses as he pleases. The diagnosis of atrial thrombus should be considered in patients with right atrial masses following myxoma excision.

Supplementary material
Supplementary material associated with this article can be found in the online version.

References