

Images in...

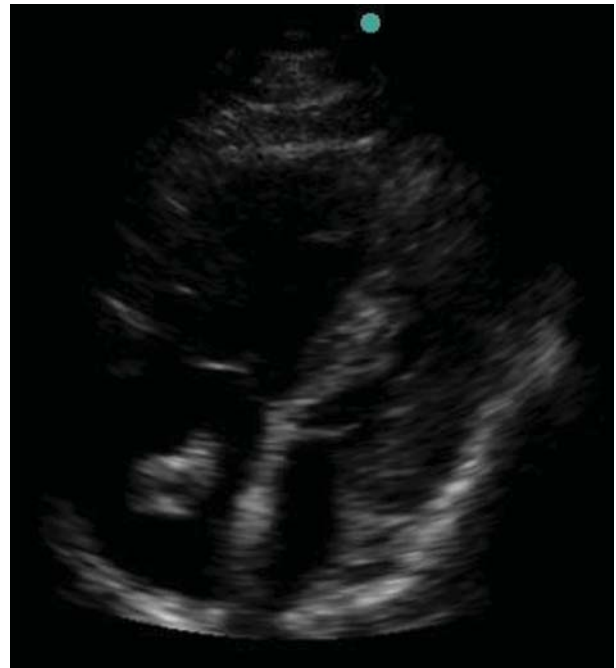
## Free-floating thrombus in right atrium

Devesh Sharma,<sup>1</sup> Abha Govind<sup>2</sup><sup>1</sup>Department of A&E Medicine, Frimley Park Hospital, Camberley, UK;<sup>2</sup>Department of Obstetrics and Gynaecology, North Middlesex University Hospital NHS Trust, London, UK

Correspondence to Mr Devesh Sharma, devsharm@aol.com

## DESCRIPTION

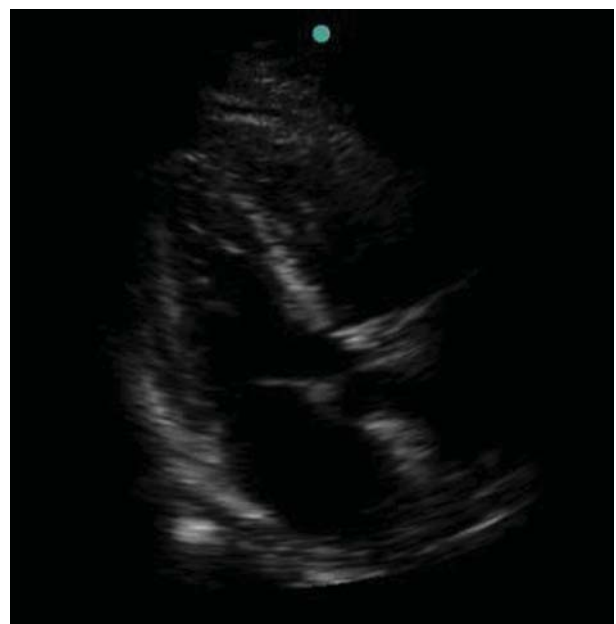
An 80-year-old man attended the emergency department (ED) after collapsing in church. When seen he was tachycardic, breathless and hypotensive. The ECG showed tachycardia. ED ultrasound showed an enlarged right ventricle with tricuspid regurgitation (video 1). Further examination revealed a lesion in the right atrium prolapsing into the right ventricle (figures 1 and 2 and video 2). Diagnosis of pulmonary embolism was made and the patient thrombolysed. Apart from age there were no obvious risk factors. Unfortunately despite treatment he deteriorated and later died. Peri-mortem imaging failed to show thrombus in the heart (figure 3), likely because it had passed into the pulmonary artery. Postmortem examination confirmed coiled, unorganised thrombus severely occluding both pulmonary arteries. ED ultrasound has been recommended in the evaluation of shock.<sup>1</sup> Echocardiography is part of this and can exclude pulmonary embolism (PE) if right ventricular overload or dysfunction is absent. The presence of these features in shock with suspected PE may justify<sup>2</sup> aggressive treatment. Elevated troponin 0.25 ng/ml (normal 0.00–0.1) with shock put this patient in the high risk category.<sup>2</sup> Right heart thrombi are found almost exclusively in those with suspected or proven pulmonary embolism.<sup>1</sup> Mortality,



**Figure 2** Thrombus seen prolapsing from right atrium into right ventricle.



**Figure 1** Echogenic lesion seen within right atrium.



**Figure 3** Absence of echogenic lesion previously seen.

especially if free floating is high, irrespective of treatment and if untreated is associated with mortality of 80–100%.<sup>2</sup> Immediate therapy is necessary, but optimal treatment controversial. Thrombolysis and embolectomy are probably both effective.<sup>1 3</sup> This patient was highly unstable and further imaging or embolectomy unrealistic.

**Video 1** Tricuspid regurgitation.10.1136/bcr.01.2012.5554v1

**Video 2** Dilated right ventricle and echogenic thrombus in right atrium prolapsing into right ventricle.10.1136/bcr.01.2012.5554v2

## Learning points

- ▶ ED echocardiography allows rapid diagnosis and treatment despite images not being ideal due to difficult positioning, lighting etc.

**Competing interests** None.

**Patient consent** Obtained.

## REFERENCES

1. **Perera P**, Mailhot T, Riley D, *et al*. The RUSH exam: Rapid Ultrasound in SHock in the evaluation of the critically ill. *Emerg Med Clin North Am* 2010;**28**:29–56, vii.
2. **Torbicki A**, Perrier A, Konstantides S, *et al*. Guidelines on the diagnosis and management of acute pulmonary embolism. *Eur Heart J* 2008;**29**:2276–315.
3. **Fellowes C**, Daly C, Babu-Narayan SV, *et al*. Portentous pinball. *Can J Cardiol* 2008;**24**:e3–5.

This pdf has been created automatically from the final edited text and images.

Copyright 2012 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.  
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Sharma D, Govind A. Free-floating thrombus in right atrium. *BMJ Case Reports* 2012;10.1136/bcr.01.2012.5554, Published XXX

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact [consortiasales@bmjgroup.com](mailto:consortiasales@bmjgroup.com)

Visit [casereports.bmj.com](http://casereports.bmj.com) for more articles like this and to become a Fellow

Keep up to date with all published cases by signing up for an alert (all we need is your email address) <http://casereports.bmj.com/cgi/alerts/etoc>