

SHORT CASES IN CARDIOLOGY

Failure to obtain a transoesophageal echocardiographic window because of a rolling hiatal hernia

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Failure to obtain satisfactory images of the heart at transoesophageal echocardiography is described in fewer than 3% of patients and is largely the result of an inability to insert the probe or of the patient to tolerate the procedure.¹ We report an unusual case in which failure to image the heart after successful intubation was attributable to a rolling hiatal hernia.

A 69 year old woman with an aortic valve homograft was referred for investigation of transient cerebral ischaemia. A transthoracic echocardiographic study showed no evidence of valve pathology or intracardiac thrombus. A mass abutting the inferior aspect of the heart was noted (fig 1). After ascertaining that the patient had no significant symptoms or known disorders relating the upper gastrointestinal tract, a transoesophageal echocardiographic study was performed. Intubation was easily performed: however, despite manipulation of the transoesophageal probe at several angles and levels, no images of the heart were obtained (fig 2). A barium swallow performed subsequently showed a large "rolling" hiatal hernia juxtaposed between the distal oesophagus and the heart (fig 3).

It is well accepted that transoesophageal imaging of the heart may be difficult in patients with sliding hiatal hernia because of poor contact and air between the transducer and oesophageal wall.² In our patient the hernia was of the less common rolling variety. Failure

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Figure 1 A transthoracic echocardiogram showing a hiatal hernia abutting the inferior aspect of the heart (arrows). An angulated apical long axis view is shown. Ao, aorta; la, left atrium; lv, left ventricle.

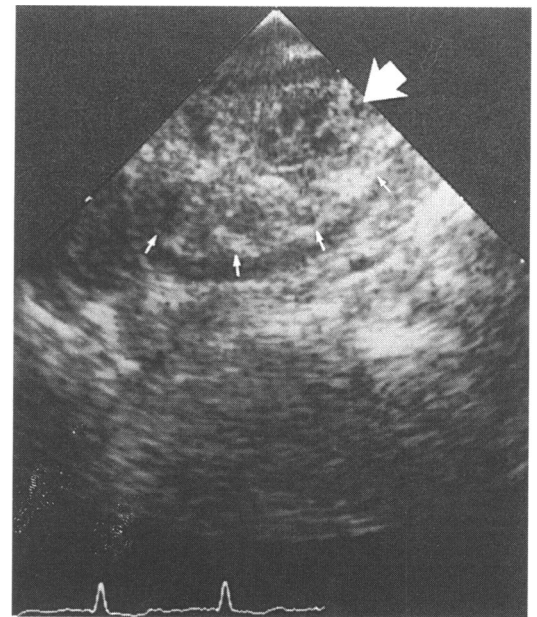
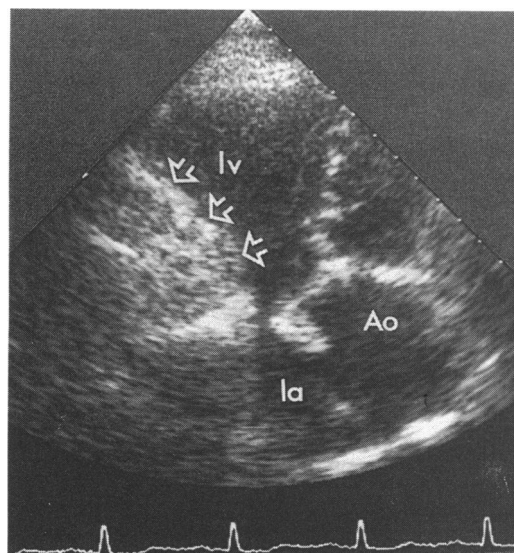


Figure 2 A transoesophageal echocardiogram showing no useful images of the heart. Visualisation of the heart was obscured by the interposition of a large "rolling" hiatal hernia (arrows).

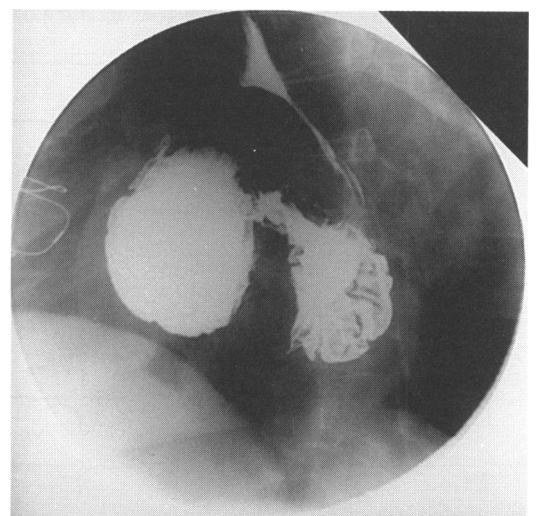


Figure 3 A barium swallow performed after the transoesophageal echocardiographic study showing a large rolling hiatal hernia between the oesophagus and the heart (lateral oblique projection). The oesophagus and stomach are on the far left, the hernia is central, and the metal ring of the prosthetic valve is on the far right.

to image the heart despite successful intubation may result if the transducer tip curves back.³ This is usually apparent where there is an increase in resistance when the probe is advanced. The present case illustrates a previously undescribed cause of failure to image the heart.

- 1 Daniel WG, Erbel R, Kasper W, Visser CA, Engberding R, Sutherland GR, *et al.* Safety of transoesophageal echocardiography. A multicentre survey of 10 419 examinations. *Circulation* 1991;**83**:817–21.
- 2 Khandheria BK, Seward JB, Tajik J. Concise review for primary care physicians. Transoesophageal echocardiography. *Mayo Clin Proc* 1994;**69**:856–63.
- 3 Peterson JW, Orsinelli DA. Transoesophageal echocardiography. When is it superior to standard imaging in clinical practice? *Postgrad Med* 1995;**97**:47–60.