Lipomatous hypertrophy of the interatrial septum is a benign cardiac mass that should be considered as part of the differential diagnosis for any atrial cardiac tumour. In the reported case, this lesion was initially suspected to be malignant and the patient was thus referred directly to cardiac surgeons for surgical removal. Unnecessary surgical intervention was swiftly averted because the cardiac surgeon promptly referred the patient for an expert echocardiogram that confirmed the diagnosis of lipomatous hypertrophy. The authors discuss the characteristic features of this lesion and how the diagnosis may be made based on several non-invasive imaging modalities without the need for a tissue biopsy. This condition is more common than initially thought and remains under-recognised by most clinicians. In such cases an increased awareness of this lesion along with the opinion of a specialist echocardiologist would help to avoid a misdiagnosis and unnecessary intervention.
Lipomatous hypertrophy of the cardiac interatrial septum was first described at a postmortem examination in 1964.4

**DISCUSSION**

Lipomatous hypertrophy of the cardiac interatrial septum was first described at a postmortem examination in 1964.4 Since then this condition has been reported widely in 88 case reports and original articles. Associated with increasing age and body mass, lipomatous hypertrophy has been reported to have an incidence between 1–8% depending on the series and methods used to detect the lesion (necropsy 1%,5 transthoracic echocardiography 8%). In a recent large prospective study, 1292 patients undergoing multislice CT for other indications were reviewed for the presence of this disorder.7 The incidence was as high as 2.2% (29 patients) and was clearly associated with increasing age, confirming that lipomatous hypertrophy is more common than previously suspected. Although it is a benign tumour remaining asymptomatic in most people it may be associated with atrial arrhythmias often requiring antiarrhythmic agents.6 Only in the rare extreme cases of large lesions, which can cause circulatory obstruction, are patients required to undergo surgical resection and septal reconstruction.8 9 The best management consists of rapid diagnosis, reassurance, and mastery inactivity.

Histologically the lesion is characterised by a non-encapsulated mass of adipocytes interspersed with atypical and hypertrophied myocytes.10 Modern imaging techniques such as echocardiography, multislice CT, and MRI are the imaging modalities that may be used to diagnose this lesion,10 but expertise is essential to avoid misinterpretation. The defining characteristic feature is the specific septal location of the atrial thickening that tends to be greater than 2 cm and typically spares the fossa ovalis, hence taking on a classical dumbbell or hourglass shape. Furthermore, the tissue is isodense to the surrounding subcutaneous fatty tissue. As the structural features of this lesion are so distinct from any other intracardiac mass it is now widely accepted that the diagnosis can be made confidently without the need for tissue biopsy.

Our case clearly shows that the diagnosis can be easily and clearly made at the bedside based on transthoracic echocardiography and TOE. Although a clear diagnosis can also be based on MRI, this test remains an expensive technique localised to specialist centres. On retrospective review of the CT recorded at the referring hospital, not only was the lesion identifiable but also the characteristic diagnostic features described earlier were evident (fig 4). Each technique can establish the diagnosis but there will be cases that test the known limitations of each imaging modality. In such situations echocardiography used in combination with CT or MRI will help to make a complementary diagnosis.13 14

Taking into account the increasing age of the general population and the expanding use of non-invasive imaging techniques, the probability of identifying this lesion will increase. However, despite the reported common incidence...
we suggest that this condition is still under-recognised by all specialties and may easily, as in this case, lead to a misdiagnosis. Had the receiving surgeon not requested an expert echocardiogram our patient may well have undergone an unnecessary major surgical procedure, which carries in itself a significant risk. Good communication and discussion of new cases between complementing specialities is not only good medical practice but is also essential in correctly diagnosing common but under-recognised conditions such as this.

Important lesson
With patient transfers a fresh opinion from complementing specialties can often revise the working diagnosis and possibly avoid the need for unnecessary intervention. Imaging modalities do not lie, rather interpretation may vary depending on the level of expertise, no matter which modality this is.

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Funding: none.

Conflict of interest: none.

I Nadra wrote the report. D Dawson and SA Schmitz carried out the imaging of the patient. PP Punjabi and P Nihoyannopoulos were involved in managing the patient.

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Accepted 4 August 2004

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