In 1988 she was admitted as an emergency after a cardiac arrest at home. She was investigated with a view to implantation of a defibrillator. Echocardiography showed a large intracardiac tumour in the right ventricle. This was confirmed by ventriculography, which also showed severe tricuspid incompetence and outflow tract obstruction with normal coronary arteries and normal left ventricular function. She was referred to our centre for surgery. It was decided to perform an endomyocardial biopsy first to identify the tumour; this showed only normal myocardium. Cardiac fibroma was considered a likely diagnosis and early surgery arranged. The patient, however, had a cardiac arrest and attempts at resuscitation were unsuccessful.

Necropsy findings The thyroid gland was normal. No nodules or tumour were identified. The important postmortem findings were confined to the heart. A small pericardial effusion was present. The heart weighed 580 g and was grossly enlarged with dilatation of the right atrium and right ventricular hypertrophy and dilatation. The right ventricle contained a rubbery oval mass 7.5 x 4 x 3.5 cm arising by a broad base from the interventricular cavity. The anterior tricuspid valve cusp was stretched around its posterior surface and its upper pole projected into the right ventricular outflow tract, causing almost complete occlusion. The mass was easily dissected off the underlying myocardium and the cut surface showed yellowish brown tissue with areas of fibrous scarring and some cystic change. Histological

Figure 1  Coronal section through the heart showing an ectopic thyroid mass arising from the right ventricular aspect of the interventricular septum and impinging on the outflow tract.
results in subendocardial thyroid ectopia (at the other extreme, failure of contact with the developing heart produces a lingual thyroid). Interestingly, in all reported cases the thyroid tissue has arisen from the right ventricular aspect of the interventricular septum, giving rise to signs and symptoms of right ventricular outflow tract obstruction or conduction disturbances, or both, in all but one case. This was found incidentally at necropsy in a patient who died from a cerebellar haemangioblastoma.

Four of the previous cases of intracardiac thyroid tissue have been successfully treated surgically. Removal of the tumour at necropsy in our case suggests that, had the patient come to surgery, the “tumour” could have been removed without disturbing the integrity of the right ventricular wall or the tricuspid valve. Owing to the benign nature of the lesion we believed that the outlook would have been good.

Abnormalities of thyroid function have been recorded in only one previous case. In this case histological examination of the “tumour” also showed changes of a colloid storage goitre. As there was no evidence of thyrotoxicosis historically in our case, it seems likely that the abnormal results of the thyroid function test were correctly attributed to amiodarone.

The possibility that intracardiac thyroid tissue represents part of a teratoma has to be considered. Intracardiac teratomas have been reported, some of which contain areas of thyroid differentiation; but despite examination of multiple blocks in our case no elements other than thyroid tissue were noted. In only one of the other reported cases has tissue other than thyroid tissue been found and in that case the associated tissue was benign congenital polycystic tumour (mesothelioa of the atrioventricular node). Another possibility is that the intracardiac thyroid tissue represents a solitary metastasis from a very well differentiated follicular cell carcinoma of the thyroid. Despite macroscopic and microscopic examination of the thyroid gland at necropsy there was no evidence of neoplasia.

In summary, we report a case of ectopic intracardiac thyroid tissue showing features of a colloid storage goitre, in which the patient presented with ventricular tachycardias and signs of right ventricular outflow obstruction. We believe this to be the first such case reported in the United Kingdom.

1 Bosch F. Uber einen Fall Von Glandula Thyroides accessoria intercardialis. Beir Pathol Anat 1941;185:244.