A CASE OF MYXOMA OF THE HEART

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The following account of a case of cardiac myxoma is offered because of the rarity of British descriptions of this unusual condition.

A woman, aged 29, was admitted to Aberdeen Royal Infirmary on April 17, 1944, as a case of breathlessness of unknown origin for investigation. She had been a waitress for eight years and had been in good health until a year prior to admission. Since then she had suffered from breathlessness on walking, rendering impossible any additional exercise such as climbing stairs. She had associated palpitation and occasional spells of dizziness when trying to hurry. No other symptoms were complained of, and the degree of disability had not increased since its onset.

The patient was a healthy looking, well-coloured woman, afebrile, with a regular pulse varying between 68 and 92, and a blood pressure of 108/70. The apex beat of the heart was felt three and a half inches from the mid-line in the fifth left intercostal space. The mitral first sound was accentuated and followed by a high-pitched systolic murmur. The pulmonary second sound was also loud. No mitral diastolic murmur was heard, and none had been heard at the out-patient examination. The day after admission, however, a rough mitral presystolic murmur appeared and remained, the other cardiac findings being as before. Radiological examination showed definite enlargement of the left auricle, slight enlargement of the right auricle, doubtful enlargement of the right ventricle and none of the left. There were no signs of cardiac failure. Accordingly, but not without some misgivings, the condition was diagnosed as mitral stenosis, of rheumatic origin, and the patient was discharged on April 20, with advice to obtain lighter work.

On June 20, she was re-admitted with heart failure. She had rested in bed for three weeks after her discharge and had then become a sedentary worker, with a four-hour day. She had felt very breathless at work, and had experienced severe attacks of breathlessness when walking home. After five days she was forced to go to bed, where she remained, more or less constantly breathless at rest, and suffering a steady epigastric pain. About a week before re-admission, she became still more breathless, with paroxysmal nocturnal dyspnoea, following a prelude of vague lumbar and generalized pains, shivering, and feverishness.

She was distressed, cyanosed, and orthopnoeic. The blood pressure was 110/84, the temperature normal, the pulse 112, regular but weaker in volume. The apex beat was now four and a half inches from the mid-line in the fifth space, and on percussion the heart appeared to be enlarged three-quarters of an inch to the right of the sternum. A well-marked rough mitral presystolic murmur and a mitral systolic murmur were present. The superficial neck veins were engorged up to the level of the angle of the jaw, the liver was palpably enlarged and tender, and oedema was present over the sacrum and in the legs; moist sounds were heard at the bases of the lungs. X-ray examination including fluoroscopy of the heart, undertaken with difficulty, showed enlargement of the left ventricle and of both auricles, especially the left, which displaced the esophagus. An electrocardiogram showed normal P waves, low voltage of T I and T II, slight depression of S–T III, and a marked right axis deviation. Treatment with rest, light diet, restricted fluids, digitalis, and mercurial diuretics, was instituted, but apart from a slowing of the heart to normal rate, little response was
Fig. 1.—Tumour in left auricle protruding through mitral valve: pedicle attached to interauricular septum: hypertrophy of right ventricle. Natural size.

Fig. 2.—Field from tumour: abundant homogeneous matrix: scattered polymorphs and mononuclears among tumour cells. Magnification × 70.

Fig. 3.—High-power view of tumour cells: thin-walled blood vessel in upper part of field. Magnification × 140.
obtained. The patient became steadily weaker, the liver increased in size with accompanying jaundice and a distressing hiccough, and infarction occurred in the right lung; finally renal secretion diminished to nothing, the blood urea level rose to 180 mg. per 100 c.c., and death took place in coma on July 6.

Examined post-mortem, the body was that of a well-developed well-nourished young female subject, showing gross œdema of the ankles and legs, marked lividity of the lips and ears and extremities, and faint icterus of the skin and conjunctivæ. The pericardial sac contained 100 c.c. of straw-coloured transudate. The heart, much enlarged, weighed 380 grams. The lumen of the dilated left auricle was almost filled by a smooth rounded tumour, 7·5 cm. × 3·5 cm. × 3·5 cm., attached to the interauricular septum; the base of the attachment was approximately 2 cm. in diameter. The tumour protruded through the mitral orifice (Fig. 1). Its cut surface was greenish semi-translucent and glistening, suggestive of myxoma, with occasional small hemorrhages. There was no hypertrophy or dilatation of the left ventricle. The right ventricle was dilated and its hypertrophied wall was almost as thick as that of the left; the tricuspid ring was dilated. A small ante-mortem thrombus adhered to the endocardium of the right auricular appendage. The coronary arteries and the cusps of all valves appeared normal. The lungs, liver, spleen, kidneys, and other organs showed chronic venous congestion; a small recent infarct was present in the lower lobe of the right lung and another in the middle lobe.

Microscopically, the tumour was a myxoma, comprising spheroidal, spindle, and stellate cells with a very abundant homogeneous matrix (Fig. 2), staining bright pink with Southgate's mucicarmine; it possessed very numerous capillary vascular channels enclosed by a single or double layer of elongated endothelial cells (Fig. 3); occasional foci of hemorrhage both recent and old were noted; numerous leucocytes, both mononuclear and polymorphonuclear, were dispersed through the matrix of the growth.

SUMMARY

Cardiac myxoma was succinctly reviewed by Fawcett and Ward in 1939 and commented on by Thompson in 1944. This case belongs to the group in which, clinically, the resemblance to the picture of mitral stenosis is strong but the differences are significant. Thus the mitral diastolic murmur was inconstant, a previous history of rheumatism was lacking, the whole symptomatic course of the illness lasted less than 15 months, and the terminal heart failure developed rapidly and relentlessly, uninfluenced by treatment.

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