

CASE REPORT

BACTERIAL ENDOCARDITIS OCCURRING ON A DOUBLE MITRAL VALVE

BY

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Duplication of the mitral valve is an uncommon finding. Wigle (1957) described a case and reviewed 20 reported cases. We describe a case of duplication of the mitral valve complicated by bacterial endocarditis.

Case Report

A 69-year-old man who had worked as a timber sawyer was seen in the out-patient department with a history of dyspnoea for 4 months and pain in the back and legs for 2 months. His appetite had been poor for 4 months and he had lost 2 stone in weight in 6 months. In 1956 he had intermittent claudication and an apical systolic murmur was noted. There was no history of rheumatic fever.

Physical examination revealed a pale wasted man with a temperature of 100.5°F. (38.1°C.). There was evidence of left ventricular hypertrophy and an apical pan-systolic murmur, conducted to the axilla, was heard. A similar murmur was heard over the aortic area but the 2nd heart sound was of normal intensity. Both legs were cold and pulses were absent on the right. On the left only the femoral pulse was palpable. He was admitted to hospital on April 21, 1964.

Investigations: Hb 52 per cent; E.S.R. 58 mm./hr. (Wintrobe). The electrocardiogram showed left ventricular hypertrophy. Chest radiograph showed cardiac enlargement.

Blood culture on April 28 was sterile; on April 30 culture grew *Bacillus proteus* sensitive to kanamycin and sulphadimidine. Urine contained albumin and many red cells. Culture yielded *Esch. coli*.

Four days after admission the apical systolic murmur was less loud and by the 7th day had disappeared. Treatment was started with kanamycin 1 g. daily in divided doses and sulphadimidine 1 g. six-hourly. Pyrexia with rigors persisted. Streptomycin 1 g. daily was added. The urinary output and blood urea remained normal. Nineteen days after admission the patient had a *grand mal* convulsion, developed left ventricular failure, and died within 24 hours.

Necropsy. The heart weighed 350 g. and the left ventricle was hypertrophied. There was a hole 0.8 cm. in diameter in the medial third of the anterior cusp of the mitral valve (Fig.). The posterior border of the hole was formed by a bridge of tissue joining the medial end of the posterior cusp to the free border of the anterior cusp. There were no chordæ tendineæ attached to the bridge. The other borders of the hole were formed by two rudimentary cusps to which were attached four chordæ tendineæ supplied by an anterior papillary muscle arising high on the anterior surface of the ventricle. The rest of the free border of the anterior cusp was supplied by chordæ from the main anterior papillary muscle, and the chordæ tendineæ from the posterior papillary muscle were attached to the posterior cusp. Three friable vegetations were present on the rudimentary valve: one immediately lateral to the hole, one on the fibrous bridge, and one on the posterior cusp. All other heart valves were normal and there was no evidence of rheumatic valvular disease. There was severe atheroma of the coronary arteries and aorta. The right external iliac artery was occluded by atheroma and organized clot. There was an abscess on the left side of the abdomen, at the level of the lumbo-sacral joint. There were many inflamed diverticulæ in the descending colon. *Bacillus proteus* was cultured from the abscess. The spleen was enlarged and contained many small infarcts. Culture of the spleen yielded an enterococcus. Section of the valve vegetations showed Gram-positive cocci.

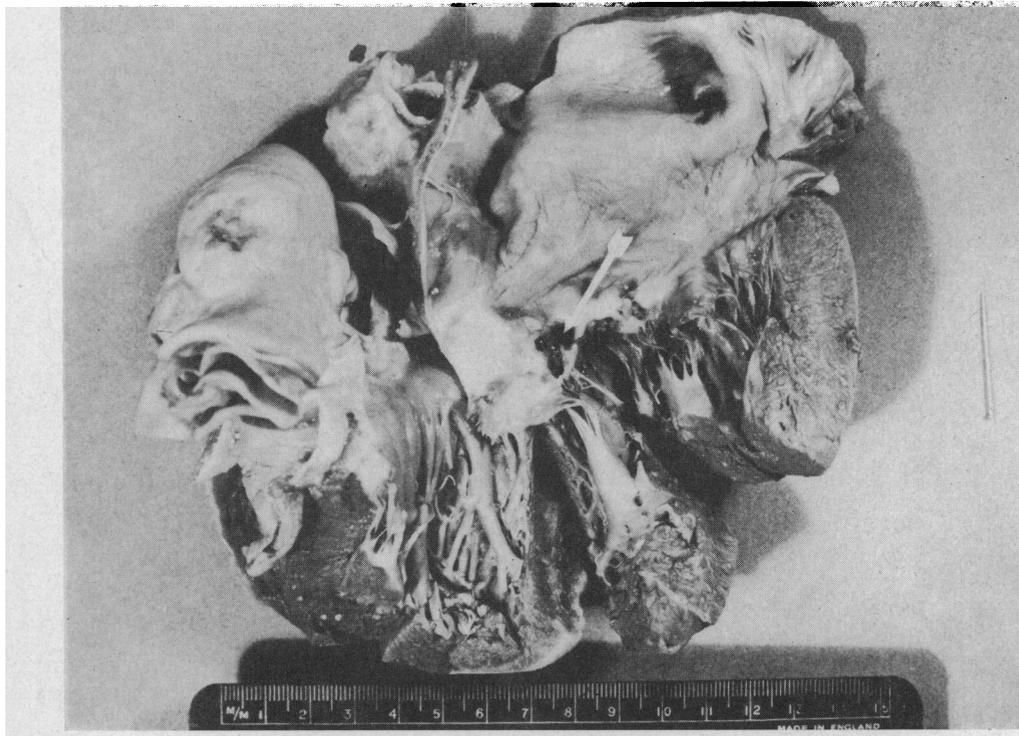


FIG.—Heart open to show mitral valve with additional orifice in anterior cusp.

Discussion

In two previously reported cases of a duplicated mitral valve a cardiac murmur was heard: a diastolic murmur was heard in the cases described by Davies and Fisher (1934). Paul's case (1930) had evidence of mitral stenosis and insufficiency.

Summary

A case of duplication of the mitral valve complicated by bacterial endocarditis is described.

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References

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