CASE REPORTS

CALCIFICATION OF THE MYOCARDIUM OF A YOUNG WOMAN

BY

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Calcification has been described in the heart valves, coronary arteries, and pericardium, but when it involves the myocardium it is usually in the site of an old infarction. In this patient we were unable to establish the precise cause for the myocardial calcification.

Case Report

The patient was a married woman of 21 years who complained of occasional left sub-mammary pain, sharp in character and very short in duration. She also stated that she suffered from a lack of energy although her history showed that she was quite an active person. There did not appear to be any exertional dyspnoea and there was certainly no angina pectoris.

Her past history was that she had diphtheria while a child of 6 months in Germany. At the age of 14 she was in hospital for two months when she had pain in the right flank, and was told that she had a stone in her right kidney: there was no operative interference and she has had no recurrence of renal symptoms. While employed in a hospital at the age of 16 a routine X-ray examination showed calcification in the region of the heart. She had one child, a healthy boy of 18 months, with no complication during the pregnancy.

A B

FIG. 1.—(A) Postero-anterior film of chest showing calcified lesion at apex of left ventricle. (B) Right anterior-oblique film.

The patient's mother is alive and well. Her father died in his late fifties from pulmonary tuberculosis. There is one sister who has had recurrent trouble with renal stones for which she had a nephrectomy.

On clinical examination the patient looked very healthy indeed. The venous pressure was normal, so were the peripheral pulses. Her B.P. was 110/60. The heart sounds were normal, there were no murmurs, and she was in sinus rhythm. Clinical examination of the lungs, abdomen, and central nervous system showed no abnormality. On screening a plaque of calcium was noted in the wall of the left ventricle near the apex, and this was well shown in chest films (Fig. 1). A chest film taken when the patient was sixteen years of age showed the same lesion. Cardiac pulsation and contour were normal and the lung fields were clear. The electrocardiogram showed normal rhythm and a QS deflection with biphasic T wave in V₄, indicating a transmural lesion in the wall of the left ventricle (Fig. 2).

FIG. 2.—Electrocardiogram, showing T wave changes and QS deflection in V₄.

Serum calcium was 10.8 mg., inorganic phosphatase 3.9 mg., alkaline phosphatase 7.5 King and Armstrong units, cholesterol 270 mg., blood urea 16 mg., all per 100 ml. Straight X-rays of the kidneys revealed no calcification. An intravenous pyelogram was normal. Dye and complement fixation tests for toxoplasmosis were negative. There was nothing abnormal on clinical examination of the urine. The Mantoux reaction was positive 1/10,000.

Discussion

We have been unable to find any reported case with myocardial calcification in this age group. Mathewson (1955) described five apparently healthy persons with striking pericardial calcification and other reports of this type have appeared from time to time. None of these cases has shown electrocardiographic evidence of a transmural injury.

Summary

A young woman is described, in whom a calcified transmural scar is present in the wall of the left ventricle. This had been present when she was sixteen years old.

It seems unlikely that diphtheria in infancy could have caused this lesion: probably it was the result of some inflammatory process, such as tuberculosis.

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Reference

Mathewson, F. A. L. (1955). *Circulation*, 12, 44.