**Aortic incompetence due to dilatation of the orifice without disease of the valves / by G. Newton Pitt.**

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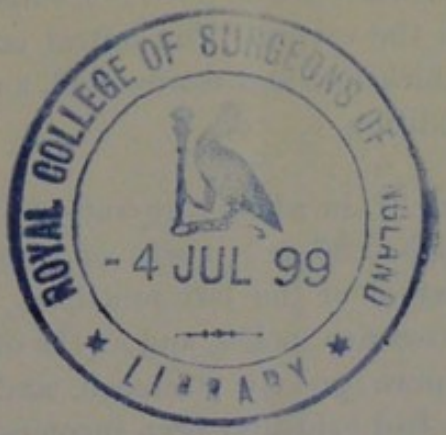


# *Aortic incompetence due to dilatation of the orifice without disease of the valves.*

By G. Newton Pitt, M.D.

[With Plate I, figs. 1 and 2.]

Case 1.—I have for many years past looked upon it as one of the accepted facts in pathology, that dilatation and yielding of the first portion of the aorta was capable of producing regurgitation through the aortic orifice, and that in such cases shrinkage and cicatricial contraction of the cusps was not an essential part of the process. The late Dr. Moxon used to teach this, and I remember more than one case in which the correct diagnosis of aortic incompetence without disease of the valves was made. I have myself made a similar diagnosis, which at the inspection was found to be correct, and the same has been the experience of others.

When, a short time ago, a physician of large experience asked what published evidence there was of the pathological proof of this view, I found that there was none very definite, and I therefore thought it would be of interest to lay before the Society the notes of the following eight cases, four of which are drawn from the *post-mortem* records of Guy's Hospital, and four are specimens in the museum. It would not be difficult to collect many more, were it necessary.

Case 1.—A man aged 42, admitted with a to-and-fro aortic and an apical systolic bruit. The heart weighed 20 oz. Mr. Targett, who made the *post-mortem*, described the first part of the aorta as

dilated. This had apparently led to aortic incompetence, and later on to slight changes in the valves. The mitral cusp of the aortic orifice was somewhat thickened and retroverted, and the other two were in fairly good condition.

Case 2.—A man aged 57, in whom a to-and-fro aortic bruit was heard. The heart weighed 26 oz.; it was of enormous size, with hypertrophy and dilatation of the left ventricle. The aorta just above the orifice measured five inches, and at the orifice four and a quarter. The valves were greatly stretched, and although not shrunken nor diseased, had evidently been incompetent. It would have been necessary, in consequence of the increased circumference of the aorta, that the width of the valves should also have been enlarged, if they were to close the orifice securely. The effect of the stretching of their bases had been, on the contrary, to make them more shallow.

Case 3.—A man aged 53, in whom during life a to-and-fro bruit had been heard at the base of the heart. At the inspection, an extreme amount of atheroma was found in the aorta, which had led to dilatation of the first portion into a pouch. The aortic valves are stretched taut, so that they close the orifice very imperfectly, but they are not much diseased themselves.

Case 4.—A man aged 29. The patient was admitted with aortic incompetence, and died suddenly a few hours after he went to bed.

Mr. Targett found all the aortic valves healthy. The left ventricle is dilated. The heart weighs 14½ oz. The surface of the aorta for an inch and a quarter is grey and irregular, owing to extensive atheroma. The calibre is increased; the descending and abdominal aorta are healthy. The condition looks like syphilitic arteritis. The aortic valves were normal.

The following are notes of four specimens in the museum:

Case 5.—A man aged 36. There is early atheroma of the aorta, just above the valves, which are healthy, but owing to the stretching of their attached part they fail to close the orifice, and look as though during life they may have been retroverted. The left ventricle is greatly dilated and hypertrophied. (Plate I, fig. 1.)

## DESCRIPTION OF PLATE I.

Illustrating Dr. Newton Pitt's paper on "Aortic Incompetence, due to Dilatation of the Orifice, without Disease of the Valves."

FIG. 1 (Case 5).—The atheromatous condition of the aorta above the valves has produced incompetence, as shown by the dilated condition of the left ventricle. The cusps are not thickened.

FIG. 2 (Case 8).—The extensive atheroma of the aorta has caused considerable pouching, which has enlarged the orifice. There is some thickening of the cusps, but the incompetence has mainly or entirely arisen from the stretching of the orifice, and not from the condition of the cusps.

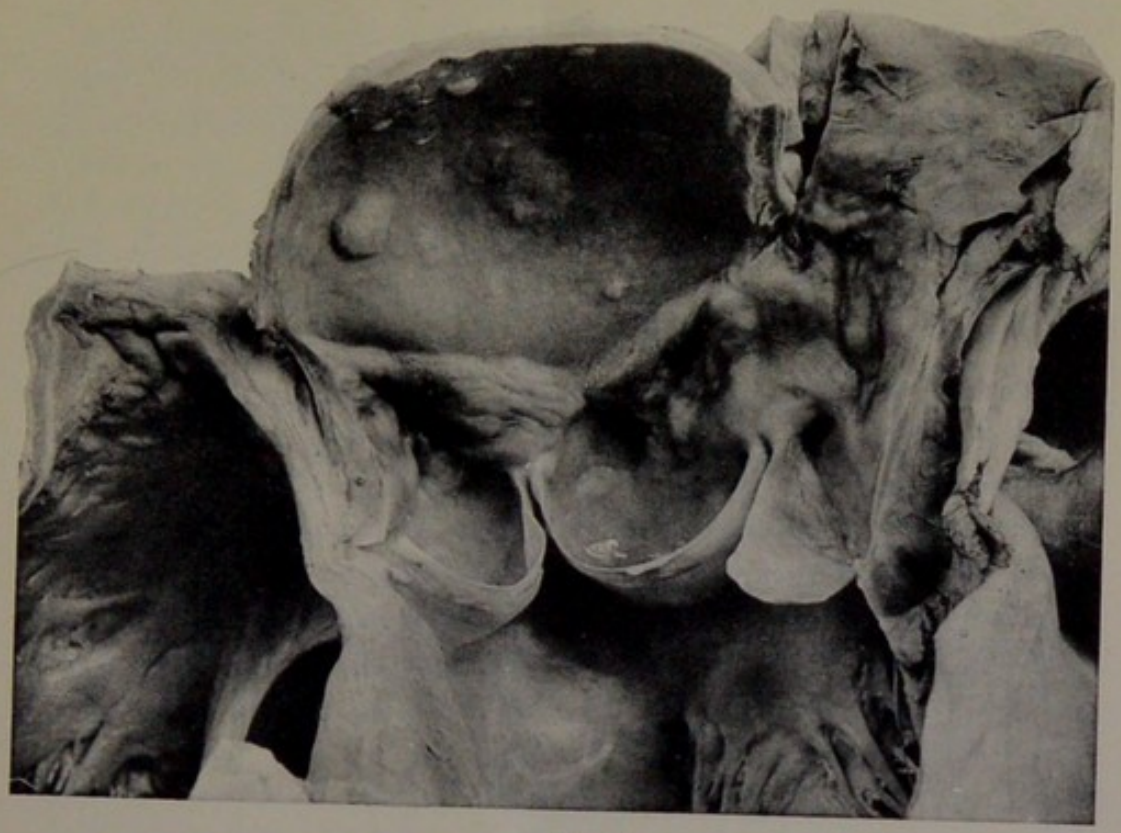

Fig. 1.

Fig. 2.

Case 6.—A woman aged 50, who died with carcinoma of the uterus. A to-and-fro aortic bruit had been audible during life. There is a saccular aneurysm of the arch of the aorta, some three inches across, which has stretched the aortic orifice. The aortic valves are slightly thickened, but are neither shrunken nor shortened. There would have been no incompetence of the valves if the orifice had not been dilated. The small size of the left ventricle shows that but a small amount of leakage had taken place.

Case 7.—A man aged 25, a sailor who had had a chancre but no secondaries. During life a to-and-fro aortic bruit had been audible. The valves are normal, but the orifice is stretched, so that the valves are narrower than normal, and are markedly incompetent. There is an acute atheromatous condition of the aorta for some distance above the valves. The surface of the vessel is wrinkled, and the wall has yielded, the lumen being dilated. This yielding has involved the attachment of the valves. The disease is limited to the first inch and a half of the aorta, and there is also a small amount near the origin of the great vessels, but the rest of the aorta is free from disease. The left ventricle is dilated; there was mitral incompetence. The rest of the viscera are normal.

Case 8.—A woman who was brought in dead. The left ventricle is dilated and hypertrophied. The aorta is atheromatous and has yielded in consequence of the change. The orifice is stretched, so that one cusp lies close along aorta, and a finger-tip cannot be introduced behind it. There was the scar of a bubo, but there was no evidence of syphilis. (Plate I, fig. 2.)

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