

a membranous diaphragm, with a central circular aperture, stretched between the auricle and ventricle. The central opening measures, in diameter, eight lines; and the edges, which are well defined, support at various points vegetations about the size of a large pin's head. There is insufficiency of the valves, a permanent patency being the result of the changes which have taken place in their structure. The cavity of the ventricle is dilated; its walls are hypertrophied, measuring at base seven lines. The chordæ tendineæ are increased in size, and the columnæ carneæ larger than in the healthy heart. The pulmonary semilunar valves do not exhibit the slightest trace of dis use.

Left Side.—Auricle dilated. Mitral valve has been converted into an agglomerated calcareous mass, which measures, at the point where the valve is connected to the fibrous ring surrounding the auriculo-ventricular opening, fully half an inch in thickness. A portion of the endocardium on the auricular aspect of the larger segment of the valve is abraded, exhibiting the irregular, gritty, amorphous deposit, which, at all other points, is covered by the serous lining of the heart. The opening from the auricle to the ventricle is greatly constricted, admitting merely the introduction of the handle of a medium sized scalpel through it. The chordæ tendineæ are shortened and very much thickened; and the fleshy columns much increased in dimensions. The ventricle is dilated and hypertrophied; its walls measure at the base, 10 lines. The aortic sigmoid valves are thickened and white. They are, however, quite capable of performing their functions.

In this description, the points most note-worthy are, the adhesion of the three portions of the trienspid valve so as to form a diaphragm between the auricle and ventricle with a circular opening; and, secondly, the extreme aetation of the mitral orifice.

It is well known that structural alterations of the right side are rare in comparison of those of the left, and for this reason they have, perhaps, an increased degree of interest, which makes a record of them advantageous; and, although not bearing immediately on the subject of this paper, which is the *narrowing* of the orifices, it does not appear irrelevant to notice them as more or less obstruction is generally combined with other lesions. Several cases are on record. Bertin gives the case (case 55) of General Whipple, who suffered for a long time from palpitation on least exercise, great anxiety, and continual coldness of extremities. The auricle was found dilated, the trienspid valve was ossified, and closed the auricular orifice so as to leave only two holes at the free edges of the valve united by a fissure an inch long and about one line broad—a third

* Treatise on disease of heart translated by C. W Chauncy, M. D.