

venience. In its character it may be regarded as the result of a fibrous endocarditis where the growth and development of fibrous tissue extends throughout the whole of the left ventricle, and the subsequent contraction of which produces the narrowing of the mitral orifice. It is in all respects a sclerosis. The fatal results in such cases being from œdema of the lung, inducing a predisposition to fatal pulmonary disease, and the prognosis in any case must be measured by the character of the thoracic symptoms. In extensive mitral stenosis sudden death may occur, and this apparently from distention of the left auricle, and its paralysis in consequence of such distention. Pepper, in his system of medicine, says, "The later in life mitral stenosis occurs the more unfavorable the prognosis."

Mitral stenosis sometimes follows upon acute endocarditis, in which case we have both regurgitation and obstruction occurring. Here the left heart is completely disabled, and the most serious and rapidly progressive of all cardiac diseases. Indeed with such a condition the lease of life must needs be short, as the condition most favouring general anasarca is present, together with great predisposition to œdema of the lungs, effusion of serous fluids into the pleura and peritoneal cavities, and passive congestions of the kidneys, all of which tell severely upon the patient.

Another condition where moderate dilatation occurs with perhaps little or no hypertrophy, is in fatty degeneration of the muscular fibres. Here we have one of the most serious pathological changes with comparatively slight indications, the general evidences being more valuable and decided than the physical signs; perhaps the only sign being a weak apical impulse, with feeble and distant heart sounds, but there is often marked anæmia, and with this a tendency to fatty infiltrations generally and throughout the body.

Anæmia when associated with evidence of fatty heart I think may be considered the most serious and occult of cardiac associations and renders such an one very liable to sudden heart failure.

I remember in the case of a young lady, on whom I made an autopsy to discover the cause of death, that both auricles were so completely

infiltrated with fat that no muscular tissue was discernible, and the right ventricle showed only here and there streaks of muscle through it, yet no heart trouble had even been complained of. She had suffered from anæmia, great weakness, and occasional headache.

Some authors mention Cheyne-Stokes breathing as particularly indicative of fatty degeneration. So far as my limited experience extends in regard to this clinical phenomenon it is evidence rather of imperfect blood supply to the medulla, and it is seen oftener in dilatation of the heart than in fatty change without dilatation.

Another point to which I would call special attention is irregularity in the heart's beat. It is often said to occur in fatty disease. What, may I ask, is the significance of irregularity in the heart's beat? I refer to irregularity without other evidence or cardiac symptom, where it has been accidentally discovered, where the irregularity is, for instance, an occasional omission in the beat. Such cases I would regard as in the main of little or no importance. Such irregularities may be congenital. Certainly they often exist for a long term of years and are not productive of ill results, outside of the mental anxiety which they are apt to cause.

In regard to disease of the pulmonary valves, any observation is scarcely necessary. Disease limited to the pulmonary valves is extremely rare, and such lesions as cause regurgitation are generally associated with dilatation, in which all the cavities of the heart share, or the pulmonary artery may be the seat of atheromatous change.

As to functional disorders of the heart. It is generally conceded that purely functional disorders of the heart are in no way dangerous to life, nor are they followed by great hypertrophy. In such cases the heart may be said to be irritable, *i.e.*, where it is more than usually prone to irregularities from nervous action. There is a condition almost allied to chorea of other muscles where excitement produces spasm, and when it is present in a heart, the valves of which are not diseased, it is a simple idiosyncrasy, not liable to induce organic disease nor be productive of harm.

To sum up then what I would say is

1. A diseased valve may be restored to functional activity and leave no ill effects.