

when there is a progressive increase in the interval between the contraction of auricle and ventricle, until, perhaps, after five or six beats the ventricular contraction fails, and the cycle starts again. With the first three or four beats of such a cycle a presystolic murmur ending in a snapping first sound is heard; then a definite interval between murmur and first sound occurs, and with it the crescendo quality is lost. During the ventricular intermittence one also hears a simple short murmur. Occasionally in cases of stenosis with perpetual arrhythmia one hears diastolic murmurs with crescendo character, though in the majority of cases of perpetual arrhythmia the murmur disappears. With the reestablishment of normal rhythm, as may occasionally occur, the murmur returns. The fact that the auricle is fibrillating when perpetual arrhythmia is found, together with the fact that the murmur is lost, points strongly to the auricular origin of the murmur. In certain cases of mitral stenosis with perpetual arrhythmia, Mackenzie has observed that the typical crescendo murmur ending in a low first sound may at times be heard. If one auscults such cases when the rhythm is slow, it is seen that the murmur becomes protodiastolic and decrescendo, and is separated by a definite interval from the first sound. With an increase in frequency of the rhythm, the crescendo murmur ending in a snapping first sound returns. Gerhardt concludes, therefore, that a diastolic mitral murmur, whether due to protodiastolic filling of the ventricle or to contraction of the auricle, takes on a crescendo quality with a snapping first sound, wherever the murmur is interrupted by ventricular contraction. The crescendo quality is lost when the murmur and first sound are separated by a definite interval. In all cases where the pulse is regular, Gerhardt believes the murmur is due to contraction of the auricle.

A New Theory of Graves' Disease.—In certain districts along the coasts of Spain it is not uncommon to see individuals who present a combination of myxedema and Graves' disease. MARIMON (*Berl. klin. Woch.*, 1913, 1, 1296) cites this as further evidence against the time-worn theory of dysthyroidism advanced to explain the symptoms of exophthalmic goitre. The theory is put forward that Basedow's disease is really due to an insufficiency in thyroid secretion. For some reason, the gland becomes unable to metabolize all the iodine which is brought to it: this iodine excess in the circulating blood, as Klose, Lampé, and others have shown, influence both the vagus and sympathetic nervous systems, and preëminently the nerve mechanisms of the heart. Myxedema and Graves' disease are two different syndromes, expressions, however, of one and the same pathological process. The former is due to a lack of sufficient metabolized iodine, whereas the latter is the result of the action of excessive unmetabolized iodine. In support of the theory Marimon gives the results of experiments conducted upon thyroidectomized dogs. When the juice of pigs' thyroids was injected in such animals intravenously, there resulted tachycardia and in one instance, pronounced exophthalmos. Marimon interprets this by assuming that the iodine in the thyroid juice, plus that taken in with the food was not metabolized by the dogs, and hence the symptoms of Graves' disease resulted.