4. *Chronic Disease of Mitral Valve:* Systolic murmur; generally louder and harsher; increased cardiac area; marked pulmonary accentuation; impulse moderately increased; pulse relatively strong and regular; frequent association with the signs of mitral stenosis; history of adequate cause for assuming organic cardiac disease.

Pure systolic murmurs then may be regarded as:

(a) *Valvular*, depending on an organic deformity of the mitral valve, or upon its relative incompetence due to so-called cardiac myoasthenia or to a myocarditis; and

(b) *Non-valvular*, accidental, or hæmic, heard best over the base of the heart and produced, according to most authorities, in the great vessels by lack of tone in their walls, or by lowered peripheral blood pressure. Such pure accidental murmurs when typical are supposed to present little difficulty in diagnosis for they are basal and unaccompanied by pulmonary accentuation or increase of the cardiac area, and claim differentiation only from aortic and pulmonary stenosis.

These latter are not easily confounded with basal functional murmurs. But with apical murmurs the matter is quite different and presents constant perplexity. Here it is necessary for prognosis to differentiate not only a relative incompetency from the true insufficiency of a diseased mitral valve; it is also most important to distinguish the permanent relative insufficiency of organic cardiac disease (primary dilatation with hypertrophy, myocarditis, etc.), from the temporary relative insufficiency of anæmic or febrile conditions where the valves fail to close simply from weakness of the papillary muscles and trabeculæ, or from dilatation due to lack of tone of the cardiac muscle itself.

From Jan. 1895, to Sept. 14th, 1898, the number of cases admitted to the wards of the Royal Victoria Hospital, were some 3,302; of these, I have examined the case reports of 2,780. All cases were rejected whose histories showed pure systolic murmurs known to be due to organic cardiac disease, whether pericarditis, myocarditis or endocarditis, and, as possibly organic, all cases where there was a record of previous or concomitant chorea, tonsillitis, acute and chronic rheumatism, arterio-sclerosis and acute and chronic Bright's disease. I retained for study 589 cases in which pure systolic murmurs occurred (21 per cent). After eliminating cases giving a previous history of rheumatism, nephritis, etc., or showing arterio-sclerosis from this number, there remained a total of 466 cases, or not quite 17 per cent. of pure systolic murmurs occurring in patients in whom there was nothing either in the previous history or in the general condition to suggest organic cardiac disease; with the excep-