

crally to be consequent on a relative mitral insufficiency. In ten cases, relative dulness began at the right sternal border, in 30 cases it was noted at the midsternum.

*General remarks:* A functional murmur is usually, though not always, systolic in rhythm; while frequently at the base, it is very commonly situated at the apex; in the more severe degrees of anæmia or intoxication it is more common at the apex, in milder disturbances at the base. In intensity it is generally "low" and "faint"; in quality, "soft" and "blowing," especially when at the apex. Rough, harsh, functional murmurs are generally situated at the pulmonary cartilage. The murmur is often transmitted from the apex to the axilla, and, as due to a relative mitral insufficiency, may even be heard in the back. Moderate pulmonary accentuation is frequent. In those cases where the murmur is basal and appears to be accidental, it is generally associated with anæmia. Moderate enlargement of the cardiac area is fairly common, and points to a relative mitral insufficiency.

The cases studied illustrate especially the following points:

- 1 In cases of anæmia, pulmonary accentuation is often associated with a pure accidental murmur.

2. Functional murmurs frequently occur where there is neither anæmia nor fever. They are then often associated with some other condition suggesting intoxication.

3. Diastolic murmurs have been noted which do not appear to have an organic origin.

4. Although accidental murmurs are generally heard at the base and those of relative mitral insufficiency at the apex, accidental murmurs are probably sometimes heard at the apex; (as in moderate anæmias where the murmur may occur at the apex unaccompanied by pulmonary accentuation or cardiac enlargement and disappear after a short time; or in high fevers where a murmur at the apex is replaced after a few days by one at the pulmonary cartilage of the same character.) On the other hand; murmurs produced at the mitral valve are occasionally, though rarely, heard best at the pulmonary cartilage.

Two conditions which it may be quite impossible to distinguish from each other by physical signs are:

A functional murmur at the apex with signs of moderate dilatation (relative mitral insufficiency), and an organic mitral murmur with signs of compensatory change. A decision can often only be reached