

5. A pulmonary systolic murmur due to organic disease is very rare except when of congenital origin. When due to organic disease, other signs, such as cyanosis, stunted growth, clubbed fingers, etc., are usually present, and the pulmonary second sound is not accentuated.

6. The bruit du diable and arterial bruits heard in the neck are always functional and hence when a cardiac murmur is associated with such vascular ones there is considerable reason for believing that it too is functional. On the other hand there is no reason why organic valvular disease should not be associated with functional disease, and one often finds this to be the case. The functional element may clear up in time while the organic one persists.

7. Functional murmurs are as a rule soft in character and accompany rather than replace the first sound. They may however be loud and rasping, and the pulmonary one is especially apt to be harsh in character.

8. Functional murmurs are not so widely conducted as are organic ones and are seldom heard in the axilla.

9. Functional cardiac murmurs vary more under different conditions than do organic ones. They are louder after exertion and during expiration, and they are markedly increased by the supine position and in fact may only be heard while the patient is lying down. The importance of posture as affecting cardiac murmurs was well emphasized by W. Gordon (British Medical Journal 15th March, 1902) and I fully endorse his conclusion "that in describing and discussing murmurs, which posture modifies, the patient's position should always be stated." Zechusen (Centralblatt für innere Medizin, March 11th, 1899) also emphasized this point. Foxwell writes thus in this connection, "The murmur in the pulmonary region is much more evident in the supine than in the erect posture, especially if it be listened for immediately upon the patient's lying down before the circulation has been able to accommodate itself to if it be not the dynamic rather than the static change in position which is the more important element in its intensification." That the horizontal posture in itself is an important factor is, however, shown by the murmur occurring so well in the children mentioned who had been for months horizontal.

10. The pulmonary second sound is early accentuated and this sign may occur before any murmur is audible. In true pulmonary stenosis no such accentuation is present.

11. In functional murmurs there is usually little sign of hypertrophy or dilatation of the heart and the apex beat is not much displaced. A certain amount of cardiac dilatation and displacement of the apex beat is however quite common, the apex being usually displaced a little upwards