

strain upon the ligaments. Whether this attitude is voluntarily assumed, or whether it is forced upon the foot, the disuse of function and the mechanical disadvantages to which the foot is subjected, predispose to weakness and deformity."

Further, the same observer has said that flat foot when fully developed is practically a dislocation, in which the astragalus has slipped downwards and inwards from the remainder of the foot to which the muscles are attached.

Flat foot is simply a further development of weak foot, and this is simply an exaggeration of a normal attitude.

The term "pronated foot" is used to describe a foot rotated at the calcaneo-astragaloid joint. It is really an early stage of flat foot; that is, while there is yet no actual dislocation of the astragalus, this bone may, and probably does, bear an abnormal relationship to the other tarsal bones.

The symptoms of this condition are a sagging of the internal malleolus and a seeming adduction of the whole foot. The sagging of the malleolus is due to a rotation of the whole leg on the foot. The arch is not apparently affected in a purely pronated foot. This variety is never rigid. The term valgus is used to denote a foot in which, in addition to abduction of the foot, a lowering of the arch and prominence about the position of the scaphoid is seen. This variety is often rigid.

Nearly all orthopaedic surgeons have contributed to the literature of the subject of the weak and flat foot. Amongst the most important of these contributions are those of Lorenz, Hoffa, Ellis, and Whitman.

As the space at my disposal is limited, I shall confine my attention to the most practical consideration of the subject of the weak or flat foot, that is, its treatment. This, to my mind, can be best considered by adopting what is really the classification of Osgood, of Boston, and considering the treatment advisable in each class.

Hoffa concluded in his study of the affections of the foot that of the acquired forms of flat foot, nearly 90 per cent. may be described, because of their method of origin, as of the static variety, consequently, our attention may be most profitably devoted to this variety alone. This, the so-called static variety, may primarily be divided into two classes (1) the flexible, and (2) the rigid. These will now be considered separately.

(1) *The Flexible Variety*.—In the majority of cases, this class represents simply an over-strain. This strain is accompanied by little or no muscular spasm.

This class may be subdivided into (a) simple weak, and (b) pronated feet.