

give the idea of osseous union ; and again, the fibrous and muscular forms may closely resemble each other. Now in all cases the best way of making a diagnosis is to lay the patient flat on his face, and let the thigh rest on the plain surface of the table, then the knee being in the position, will project upwards. Now if there is complete ankylosis you will not be able to move the foot in the slightest degree when the thigh is kept firm on the plain surface, but if it is of the incomplete form there will be a certain degree of mobility, more or less, according to the length of time that the disease has existed ; in a comparatively recent case the foot may be made to describe an arc of a circle. It is of importance to diagnose between the fibrous and the muscular forms. And this you may be able to do with tolerable accuracy by attending to the following points,—In the fibrous form there is no tension of the ham-string muscles and they are not rendered tense when you make traction on the foot, and the limb moves to a certain extent and then comes to a sudden stop ; but in the muscular form the tendons are found to be tense, and the rigidity is increased by force applied to the foot ; these two forms may co-exist. The fibrous form is the most common, and arises from inflammation round the joint. It is sometimes associated with rheumatic inflammation, or it may be the result of synovial inflammation, numerous bands are formed, and are attached in various places and stretching in all directions round the joint bind it in position.

In the muscular form the rigidity is due to the contraction of the muscles, and may arise from two causes ; it is sometimes associated with derangement of the uterine system in females, and then you see what is called the hysterical knee ; the patient complains of pain in the knee, which after a time becomes contracted without any sign of inflammation ; in such cases the knee becomes gradually contracted. It may be due to the irritation of worms in the intestinal canal, producing spasmodic contraction of the muscles by reflex action, or from the causes that give rise to squint and the various affections of that kind. It may sometimes be due to paralysis of one set of the muscles, but this I think is not a frequent cause, and I believe that this form of the disease occurring in the adult is always due to spasmodic contraction. When it begins in infancy or childhood it may be due to congenital shortening of the muscles, or to an arrest of development, and I have seen cases which appeared to me to be due to this cause, when the tendons appeared naturally too short. This, however, is a point that has not been sufficiently made out yet, and will require further investigation before a satisfactory conclusion in regard to it can be arrived at.

Now with regard to position. Fibrous ankylosis may take place