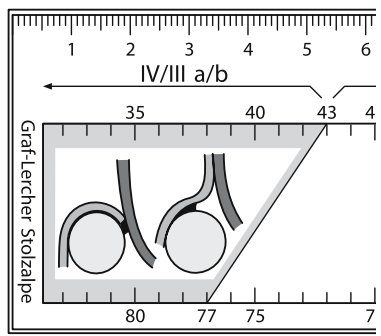


8 Classification Using the Sonometer



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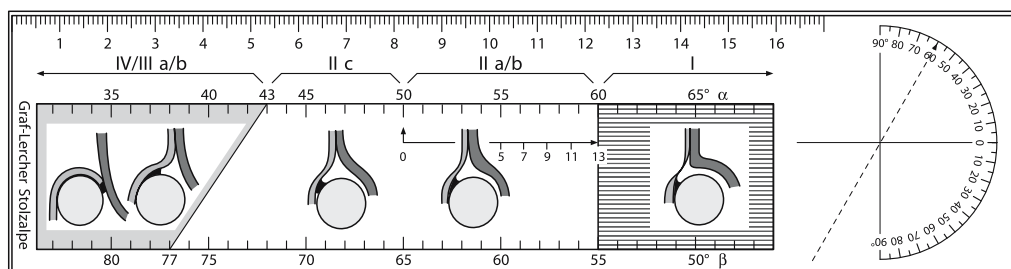


Fig. 8.1. Sonometer

If all the hip types with their alpha and beta angles are entered in a line, a table called the sonometer results. Using this, all joints can be classified according to their type, degree of maturation and their angle measurements taking into account the age of the joint.

The following questions can then be answered – *Is the hip joint for the baby's age:*

1. Normal?
2. In need of monitoring?
3. In need of treatment, or in some cases close monitoring with possible treatment later?
4. Definitely in need of treatment?

An alternative system to the sonometer is the maturation curve which underlies the sonometer. However, the classification is not as rigid, but one and two standard deviations can also be used to indicate the requirement for monitoring and treatment.

The important transition points are firstly from type II to type I and secondly the change from type II to decentred (stable or unstable?).

NB. 420 or less means that the socket is so flat that the femoral head cannot be kept in the original acetabulum by the cartilaginous acetabular roof and therefore dislocates out of the socket. Whether it is a type III or type IV joint depends on the deformity of the acetabular roof and not on the alpha value. Therefore the classification of type III and type IV cannot be carried out with the alpha value. The classification of type III and type IV is anatomical and not a measurement.

By the end of the 12th week of life, a type I joint must be attained, therefore an alpha value of at least 60° or more.

8.1 The Alpha Values

When all the alpha values are placed along one line, this can be divided into three large sections (Fig. 8.1):

1. The middle section from 43° to 59° (type II joint).
2. 60° and more (type I joint).
3. 42° and less (decentred joint; for exception, see Sect. 9.2).

8.1.1 Subdivision of the Type II Joint

- Type IIa: Alpha value between 50° and 59°, physiologically immature joint. Type IIa joints can be subdivided into type IIa(+) or type IIa(-) dependent on the age.
- Type IIa (+): During the first 3 months of life the hip joint matures in an exponential fash-