

# A LONGITUDINAL OSTEOTOMY

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Wedge osteotomy, which is usually used for correction of ankylosis of the knee-joint in 45-90° flexion, has, in my experience, certain disadvantages. For maintenance of the correct position one must rely mainly on the plaster, which does not wholly guarantee contact between the resection surfaces, so that the result is often non-union with an unstable leg, which requires a splint. To avoid these risks, I have used, for a number of years, a method which I have called a longitudinal osteotomy, and which I have not seen described, nor heard of anyone else using.

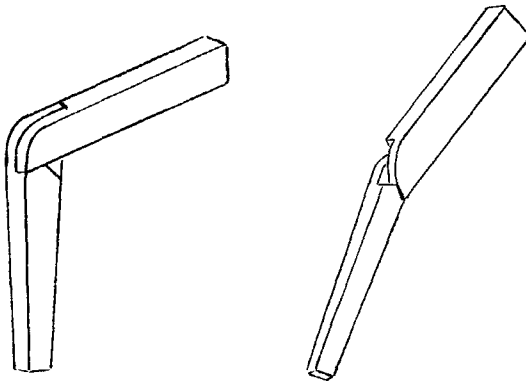
The ankylosis is exposed by a bayonet incision which begins on the outer side of the thigh about 20 cms. above the joint line, goes straight down to it, crosses its anterior surface and continues down the inner side of the leg. The soft parts are freed from the midline anteriorly round the bone to the popliteal fossa, so that one can introduce an instrument to protect the vessels and nerves. Then, the ankylosed bone is split longitudinally with a saw from the anterior surface of the angle, and, on the lateral half the femur is cut through in continuation of the line of the posterior surface of the tibia and on the medial half the tibia is cut through in continuation of the line of the posterior surface of the femur. For this one can use either a saw or a chisel. When this has been done and the bone ends have been shaped the flexion can easily be corrected, but although, theoretically, splitting along

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the plane of the angle should have also corrected the rest of the deformity one usually finds that there is still a considerable valgus position and often also rotation. These are easily corrected by removing a wedge with a saw from either the upper or the lower fragment. One can often wedge the fragments firmly together and unite them with two transverse screws.

The wound is of course closed exactly. In my own cases I have applied a circular plaster bandage which is not absolutely necessary, but seems safer.



The advantages of this operation are the exact apposition and remarkably reliable union of the fragments, which guarantee a quick firm fusion. Weightbearing can begin after 4 weeks and the plaster is removed after 6.

The operation can also be used for correcting very acute angles of the femur and tibia, e.g. after malunion of fractures.

The same principle is the basis of the operation for correcting rotation deformities in congenital clubfoot, which I found, when the American literature again became accessible after the war, had been described by Sell in 1941. I have used it with success, and believe that it is superior to the usual transverse osteotomy. The operation ought also to have advantages over transverse osteotomy for rotation osteotomies of the femur.

## SUMMARY

The author describes a longitudinal osteotomy for correction of ankylosis of the knee-joint in flexion. He has found that the exact apposition of the fragments, which he obtains by this method, gives early sound union.

## RESUME

L'auteur décrit une ostéotomie longitudinale pour corriger l'ankylose d'un genou en flexion. Il a trouvé que l'apposition exacte des fragments qu'il obtient grâce à cette méthode donne une jonction rapide et saine.

## ZUSAMMENFASSUNG

Verfasser beschreibt eine longitudinale Osteotomie zur Korrektur einer Ankylose des Kniegelenks in Flexion. Er hat gefunden, dass die exakte Apposition der Fragmente, die er mit dieser Methode erhält, eine frühe und feste Vereinigung ergibt.