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DRILLING OSTEOCLASIS

Nowadays correction of curvatures of the long bones—rickety, post-traumatic, or of other origin—is carried out nearly always through open osteotomy. Bloodless osteoclasis is by many considered an almost obsolete method—not merely by the surgeons who have never taken any particular interest in osteoclasis, but also by orthopedists. For instance, *Haglund* has refuted the method rather decidedly in his “Prinzipien”.

Following my teacher, *Slomann*, I have always employed osteoclasis in suitable cases—partly because *Slomann* left me a most excellent osteoclast that was made after his own directions, partly because the operation is so easy and lenient, and requires immobilization in plaster only for a much shorter length of time.

Previously, however, I was inclined to define the indications for employment of the simple closed osteoclasis rather narrowly: Children under the age of 2—2½ years, or patients in whom roentgenography of the bone concerned showed rather pronounced halisteresis (paralytic extremities). Then, some years ago, *Brandes* (of Dortmund) sent me a little reprint in which he suggested the modification of osteoclasis that is called drilling osteoclasis, which allows of a considerable wider range of indications, while it also makes the method considerably more precise as far as the results of the correction are concerned.

The method is extremely simple: Corresponding to that point of the bone where the correction is desired to take place, a tiny incision is made into the skin and through this incision a transverse row of holes are drilled into the bone with a drill measuring about 3 mm. in circumference—from 3 up to 8 holes,

depending upon the thickness of the bone. The little wound is closed, and then the osteoclast is applied in the usual manner; and then the infraction will always take place at the site of the drilling. If the bone is not very solid, the infraction may even be performed by hand, without any osteoclast.

As mentioned already the osteoclast I am using is the one constructed by *Slomann*, that is, merely a more solid elaboration of the old *Grattan* osteoclast. The advantage of *Slomann's* model is that it is heavier and more solid in its construction and that the branches may be adjusted more precisely.

The principal field for the employment of this method is made up indeed by the varus curvatures of the leg, but it may be applied also to the lower part of the femur—especially for valgus deformities of paralytic legs in children. For the present I have extended the age limit for osteoclasis preceded by drilling as outlined before, but other clinicians go much farther. When the varus bend is located rather near one end of the bone, it may sometimes be difficult with ordinary osteoclasis to make the infraction hit exactly the point corresponding to the apex of the curvature, but this is easily ensured by the preliminary drilling.

If in conclusion I am to summarize the advantages I think this method affords in preference to open osteotomy, they may be put as follows: 1) The operation is small, and it is performed quickly, so that the child is not affected noticeably by this operation, whereas bilateral osteotomy performed on a little child is always to be reckoned as a not insignificant attack upon the general condition of the child. 2) Osteotomy always implies some risk of complications in the healing of the wound. Recently *Norrby* (*Acta Orthopaed. Scandinav.*, 8: 208, 1937) has given an account of the results obtained with osteotomy and osteoclasis in the Orthopedic Clinic of Stockholm, and he found delay in healing or pseudarthrosis in 2—3 % of cases treated with osteotomy, never in the cases treated with osteoclasis. 3) After osteoclasis the healing is established in 2—3 weeks, while it often takes just as many months for healing after osteotomy.