

To prevent the formation of a "dead space," Nichols advises cutting the upper end of the bone wedge-shaped—with the apex pointing downwards.

This method has been successful in many cases in securing an almost perfect anatomical shaft; the limb being capable of performing its function perfectly.

In 1897 I removed the entire shaft of the tibia, in a young lad (specimen shown), by the method just described. Healing took place rapidly, and when last seen, there was little to indicate, on examination, that he was the possessor of a second tibia in that limb.

In cases where there is but one bone, as in the humerus, the danger of deformity from muscular contraction must be thought of, before removing the supporting and rigid sequestrum. If allowed to remain too long, the periosteal tube becomes rigid and dense and has very little or no power of repair centrally. Here he advises waiting for about 16 weeks. An incision is made down to the periosteal shell, which is sufficiently opened up to enable the surgeon to extract the necrotic bone. This latter procedure may be comparatively simple or very difficult, according to the extent of necrosis. He endeavours to injure the periosteal tube as little as possible, crushing the necrosed bone, if necessary, to facilitate its removal. The resulting cavity is disinfected, the skin incision closed, drainage at the lowest point. Fixation must be employed to prevent yielding of the bone to muscular action or to gravity. The process of repair is slower than when the dead bone is removed earlier, but infinitely more rapid and more successful than when the sequestrum is removed at very much later periods.

In the chronic stage, with an old necrotic shaft usually worm-eaten and perforated with sinuses, enclosed by a shell of dense periosteal and often sclerosed bone, a condition so frequently met with in hospital practice, Nichols advises a similar method to that employed in the subacute stage, but in addition to removing the dead bone he excises a corresponding portion of the newly formed involucrum and then folds the surrounding periosteum as before. He thus succeeded partially in obliterating the cavity in one case reported.

This method cannot be applied to a large class of cases in which the cavity not only involves the shaft but also the epiphysis, cases which have been repeatedly curetted and packed with gauze until both the surgeon's patience as well as the patient's have been exhausted.

Three years ago I had an opportunity in Vienna of seeing Mosetig-Moorhof's results in the treatment of such cavities and in cavities situated elsewhere, especially of tuberculous origin.