

A. MONBERG, COPENHAGEN:

LANE'S OSTEOSYNTHESIS — TECHNIQUE, RESULTS

The material comprises 63 cases of fractures of the long bones treated with osteosynthesis after *Lane's* method in Frederiksberg Hospital, 1918—28.

Nearly all the operations have been performed by the surgeon-in-chief *L. Kraft*, so that they have been carried out with the same technique, which facilitates a comparison of the results obtained. In the same period were treated 530 patients with fracture of these bones — including, however, 110 cases of fractura colli femoris.

Osteosynthesis was performed in 8 percent of the fractures.

The after-examination comprises:

Fract. humeri	10
» antibrachii	6
» femoris	18
» cruris	29

The osteosynthesis is performed in fractures where the first attempt at reposition did not give a satisfactory position, and in cases where it would have been difficult to keep the fragments in place after the reposition.

The osteosynthesis has been carried out 8—14 days after the accident.

Fract. humeri was present in 10 patients; complicated in 3 cases, and uncomplicated in 7. *Parham* splint was employed in 2 of the cases, *Lane's* splint in the rest.

Healing was completed in 50 percent of these cases within one month, and the rest within 2—3 months. All the patients were capable of work within 4 months.

Osteitic processes with suppuration occurred in 2 patients with complicated fracture.

Fract. antibrachii was present in 6 cases, 1 complicated and 5 uncomplicated. All healed within 2 months, without any osteitic processes, and in good position.

Fract. femoris in 18 cases, all uncomplicated. The fragments are kept in place with 2 splints; in this way one obtains a double effect corresponding with that of the T beam employed in iron construction.

Complete recovery within 4 months in 13 cases, and within $\frac{1}{2}$ year in 3 cases.

Good position obtained in 13 cases; but in 5 cases some of the screws had loosened, and 2 of these cases had osteitic processes.

Fract. cruris (tibiæ) in 29 cases, age 9—65 years, 6 of the fractures being complicated, 23 uncomplicated.

Healing within 2 months in 9 cases, within $\frac{1}{2}$ year in 17 cases; in 2 cases the healing took more than 1 year, and 1 patient died from embolism.

The position was good in 20 cases; in 9 cases there was some forward deviation and some valgus position.

Osteitic processes occurred in 8 cases.

Taking all the cases together, we find

healing within 3—4 months in 60 percent

» » 6 » » 30 »

» » 1 year » 10 »

Osteitic processes in uncomplicated fracture occurred in 24 percent of the cases, and in 35 percent of the complicated fractures.

Pseudoarthrosis did not develop in any case.

The function of the adjacent joints was good in every case.

Technique: The time for the osteosynthesis ought to be about 2 weeks after the accident, as the conditions of regeneration are then better, and the reposition will not be hindered by contractures.

In the leg, the reposition of the fragments is done through an incision about 20 cm. in length — in fracture of the femur, the incision should be somewhat longer — best with Tuffier forceps, the fragments being lifted out of the wound, forming

an angle and thus facilitating that the ends of the fragments are pushed into each other, giving an ideal reposition. The bandaging should be done with the greatest of care, avoiding any tension between the fragments and the inserted plate. Undoubtedly, a large part of the osteitic processes is due to the circumstance that, in such cases, the plate has a redressing effect instead of — as was intended — a mere retaining action.

When the result of these operations — performed with the Kraft technique — appears to be better than found in previous statistics, it is largely because here the osteosynthesis is performed 1—2 weeks after the accident, and because the reposition is made in the above mentioned manner with Tuffier forceps, and finally, because the bandaging is adapted to the reposition so that tension between the fragments is avoided.

DISKUSSION:

Langenskiöld, Helsingfors:

It seems to me that osteosynthesis ought to be performed as soon after the accident as possible.