

AFTER-EXAMINATION OF NINE CASES OF OPERATIVELY TREATED MEDIAL COLLUM FEMORIS FRACTURES

BY
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At the meeting of the Northern Orthopedic Association in 1932, at Varberg, I reported on some cases of medial fracture of the neck of the femur which I had treated operatively, using a method of extra-articular osteosynthesis devised by myself. I expressly stated at the time that it was yet too early to make any claim for the adoption of my method as the standard one, because a longer time of observation would be necessary before the ultimate conditions of healing could be absolutely ascertained. Thus, it might be questioned, for instance, whether the healing would not be retarded, or even prevented, by the presence of the nail, seeing that the latter was of metal.

I am now in a position to present nine cases, in which so long time has elapsed that it has been possible to follow the process of healing even by roentgenological examination. The first of them was operated on on Jan. 18th, 1932, the last one on Sept. 27th, of the same year. The time between operation and after-examination has been from seven to about sixteen months, in most of the cases over nine months. The oldest patient was 71 years old, the youngest 50; the average of their ages 60.

Scrutiny of the roentgenograms shows indubitable osseous healing in seven of the cases. In one (no. 7), in which the after-examination took place nine and a half months after the operation, healing had not yet been accomplished. Of this case I already in my first communication¹⁾ stated that, owing to

¹⁾ *Acta Orthopædica*, vol. III, p. 362.

miscalculation, a too short nail had been used. The roentgenogram taken in lateral projection further shows that the position of the latter is not strictly axial, and that probably not even its full length enters the bone. It is in all probability this entirely technical error which accounts for the failure of the bone to heal. The normal, active mobility of the hip-joint is restored, however; and the patient walks, with the aid of a stick, though she limps, but very little.

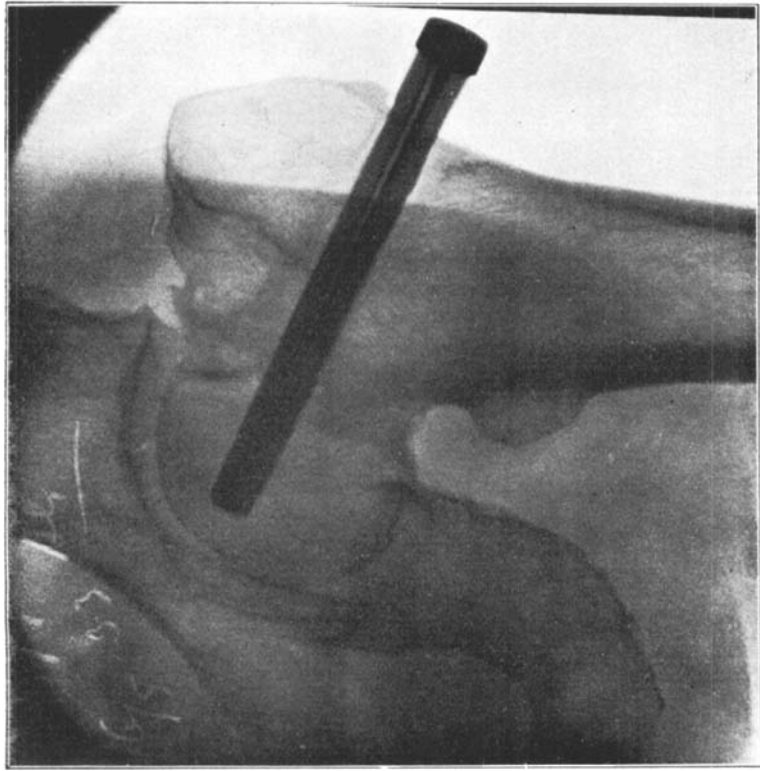
In Case no. 1, where osseous healing had not yet set in seven months after the operation¹⁾, there now seems to be at least partial osseous healing, and, concurrently with this, the function has improved, so that the normal mobility is practically restored; the patient walks without the aid of a stick; there is absolutely no pain, and only a very slight limp, due to the coxa-vara position.

The importance of the correct choice of metal for the nails is brought out very clearly by the after-examination. In my two earliest cases I used nails of chromed steel, in all the other ones rustless steel. In both those first cases it is plainly seen how the nails have become corroded. This is particularly noticeable in Case no. 2, where there is even visible osteoporosis around it. In that case the nail was removed about fifteen months after the operation. It lay entirely loose, and was very rusty; there was no sepsis. In all the cases where rustless steel was used, there was a total absence of reaction around the nail.

My material now comprises 18 cases of medial fracture, alive at the present writing. In 17 of these, the *functional* result must be considered as very good, in one—the no. 7, just mentioned—as good; while the *anatomical* result may be characterised as very good in 16, good in 1, and unsatisfactory—so far, at least—in 1 case.

I have no longer any hesitation in recommending extra-articular osteosynthesis, by the method and on the lines indica-

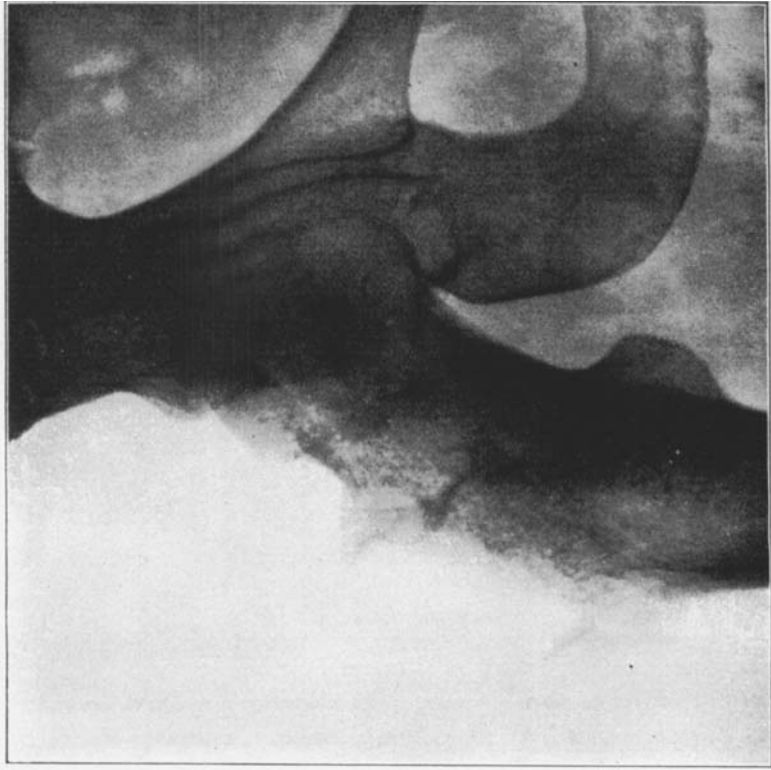
¹⁾ The case-numbers (except for case 10, which is a new one) are the same as in my former paper in the *Acta Orthopædica* (see foot-note above), to which I would therefore refer with regard to the details of previous condition, etc. My main object with the present communication has been to report on the osseous healing.



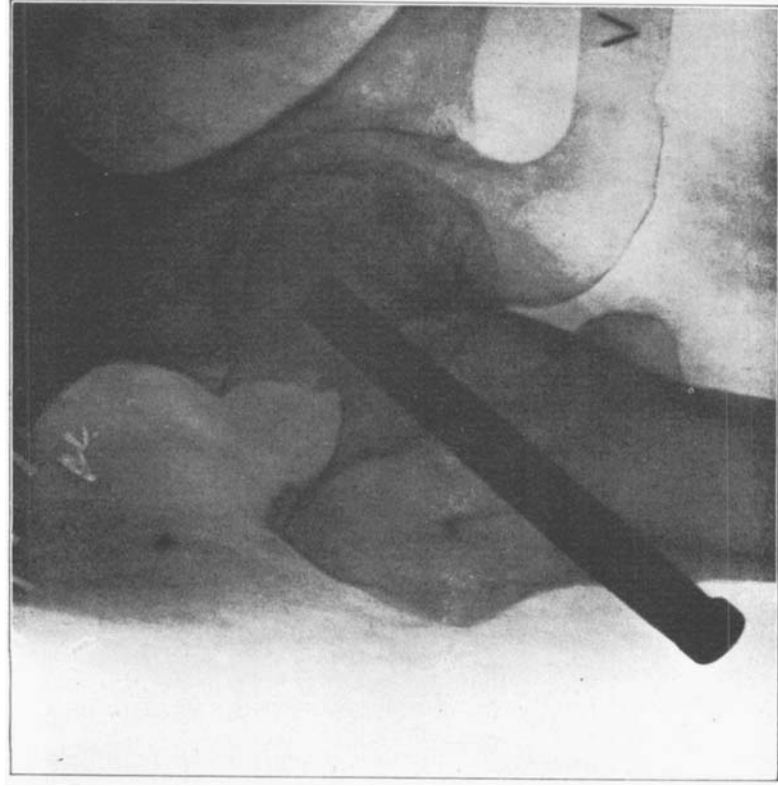
Case 1. Woman, 70 years old, 16 months after the operation.



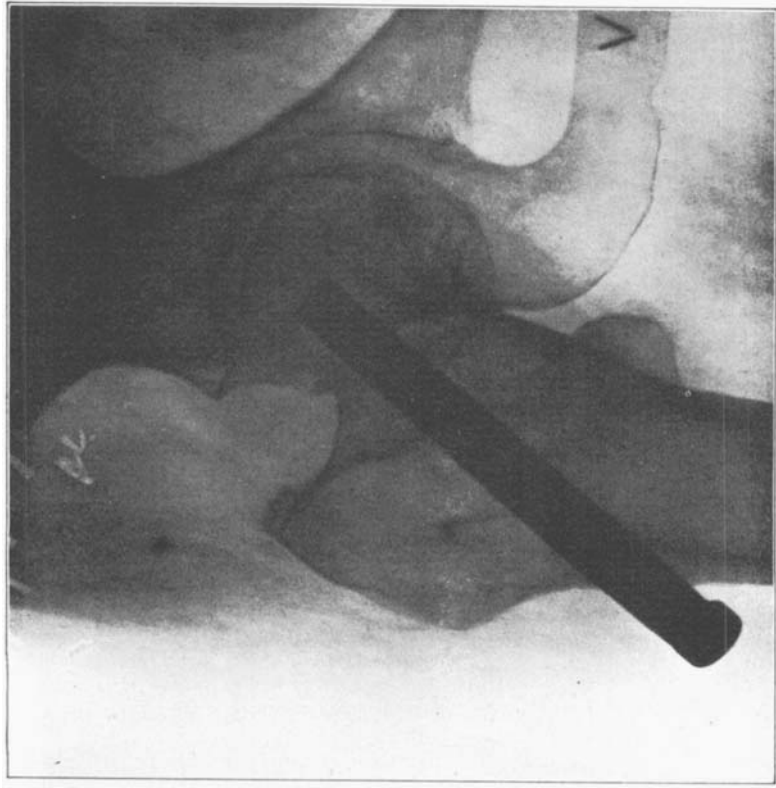
Case 2. Woman, 51 years old, 15 months after the operation.



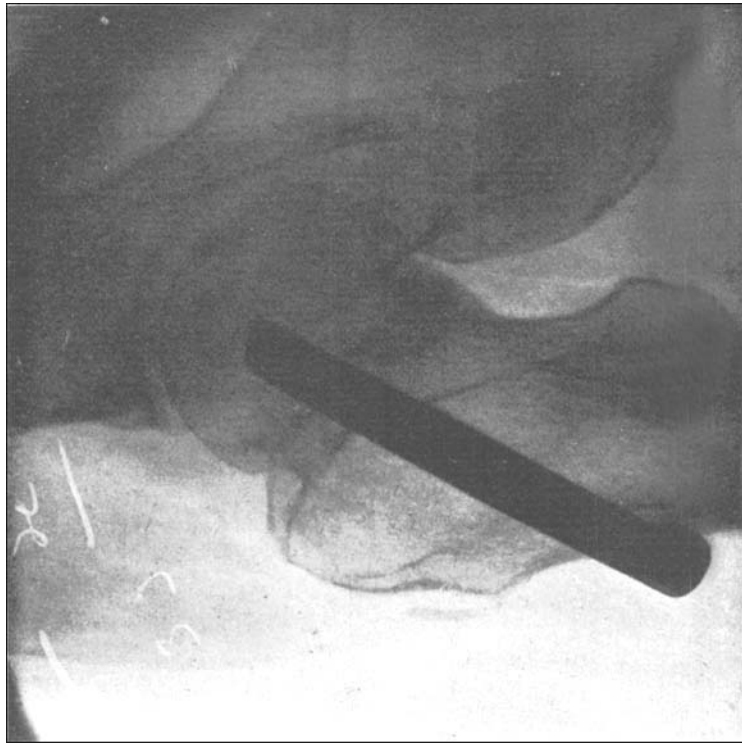
Case 2. 14 days after the removal of the nail.



Case 3. Woman, 57 years old, 15 months after the operation.



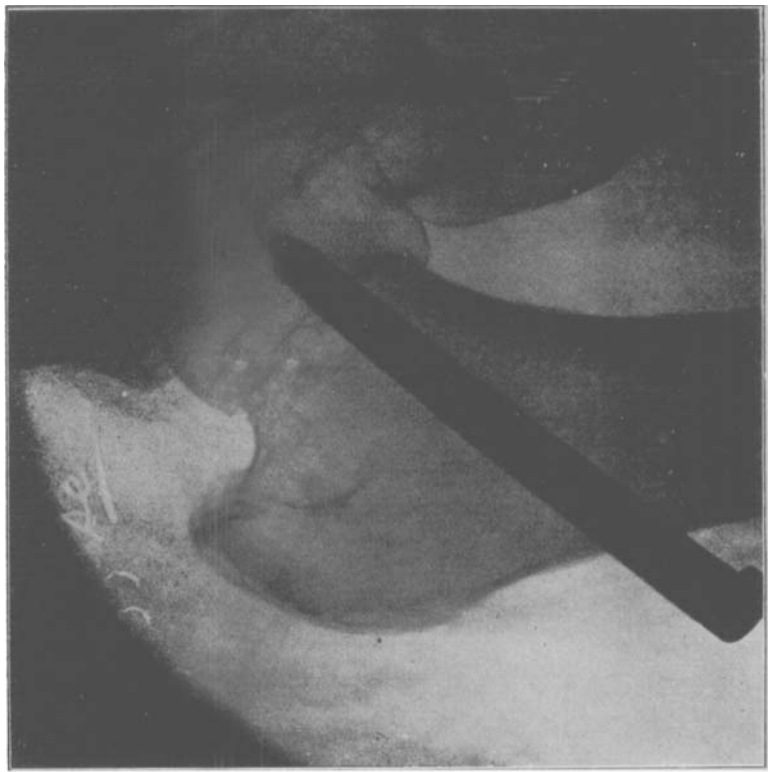
Case 4. Woman, 72 years old, 11 months after the operation.



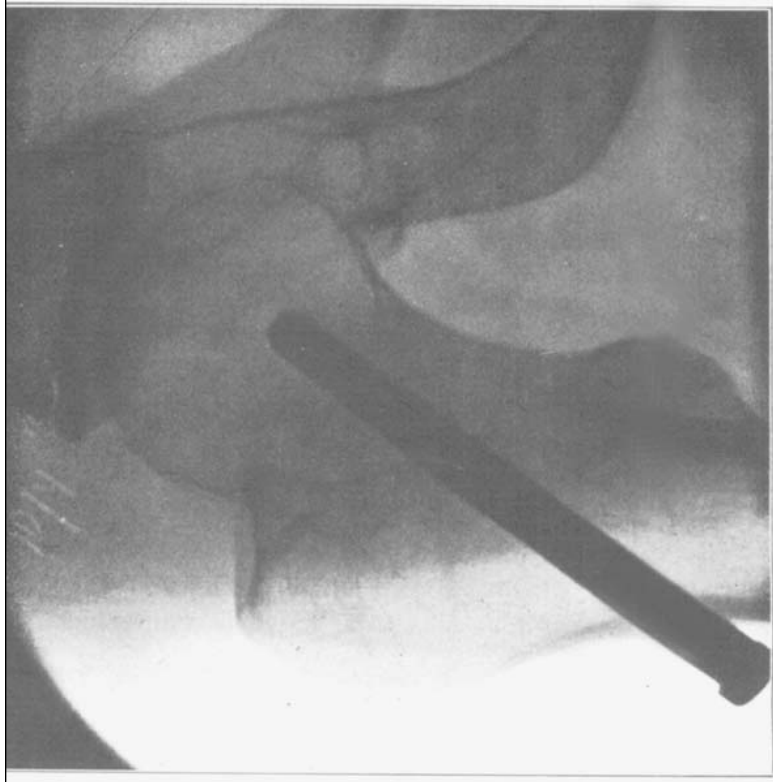
Case 5. Woman, 59 years old, 10 months after the operation.



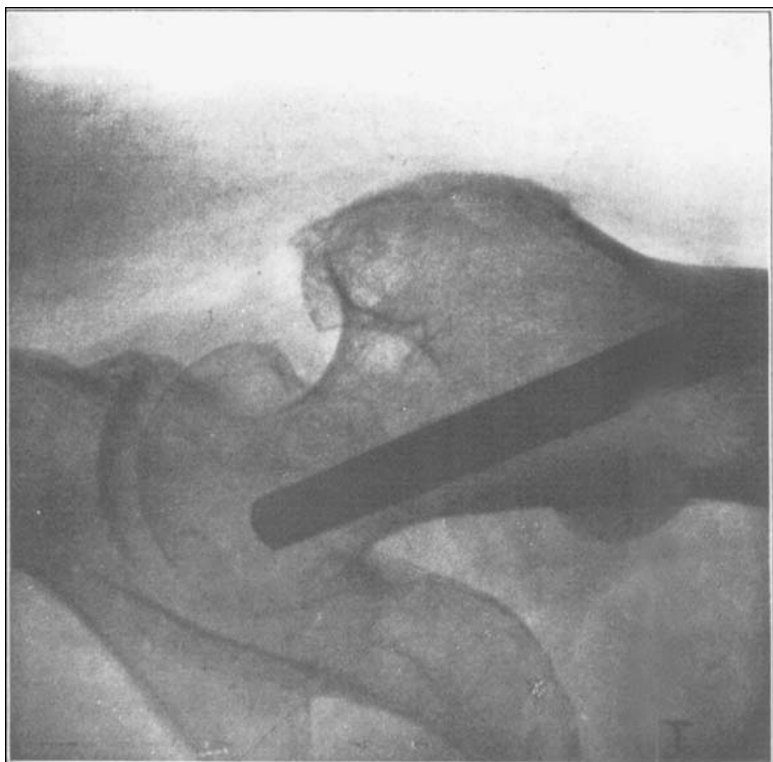
Case 7. Woman, 53 years old, 9½ months after the operation.



Case 10. Woman, 64 years old, 8 months after the operation.



Case 11. Man, 69 years old, 7 months after the operation.



Case 12. Woman, 56 years old, 8 months after the operation.

ted by me, as the standard treatment for medial fractures of the neck of the femur.

SUMMARY

The author has after-examined 9 cases of medial collum femoris fracture, treated by the method of extra-articular osteosynthesis, after periods of from seven to sixteen months. In 7 cases he found indubitable osseous healing, in 1 case partial healing. In 1 case there was not yet, after seven months, any healing of the bone, in all probability owing to a technical mistake. The author now feels justified in recommending extra-articular osteosynthesis, by the method and on the lines indicated by him, as the standard treatment for medial fractures of the neck of the femur.

RÉSUMÉ

L'auteur a revu, après des périodes variant entre sept et seize mois, 9 cas de fractures médiales du collum femoris traités par la méthode de l'ostéo-synthèse extra-articulaire. Dans 7 cas, il trouva une guérison osseuse indubitable et dans 1 cas une guérison partielle. Dans 1 cas, il n'y avait encore, après sept mois, aucune guérison de l'os, ceci devant être attribué, selon toutes probabilités, à une erreur technique. L'auteur estime maintenant qu'il est en droit de recommander l'application de la méthode de l'ostéo-synthèse extra-articulaire, telle qu'il l'a indiquée, comme étant le traitement standard des fractures médiales du col du fémur.

ZUSAMMENFASSUNG

Der Verfasser hat 9 Fälle von medialem Schenkelhalsbruch, die mit extraartikulärer Osteosynthesis behandelt worden waren, nach Verlauf von 7 bis 16 Monaten nachuntersucht. In 7

Fällen fand er unzweifelhafte Knochenheilung und in 1 Falle teilweise Heilung. In 1 Falle war nach Verlauf von 7 Monaten noch keine Heilung des Knochens wahrzunehmen, und zwar wahrscheinlich auf Grund eines technischen Fehlers. Der Verfasser hält es für gerechtfertigt, bei medialen Frakturen des Schenkelhalses die extraartikuläre Osteosynthesis nach dem von ihm vorgeschlagenen Verfahren und den darin angegebenen Richtlinien zu empfehlen.