

A CASE OF PSEUDARTHROSIS OF THE NECK OF THE FEMUR, TREATED BY THE METHOD OF EXTRA-ARTICULAR OSTESYNTHESIS

BY
SVEN JOHANSSON

CASE HISTORY

Journal no. 630/33. Male, aged 35 years. Admitted Feb. 25th, 1933, discharged 10/6, same year.

On Dec. 22nd, 1931, the patient had fallen from a chair placed on a table, and had hurt his left hip. He had been unable to stand on his leg, and had been admitted into a hospital at Stockholm under the diagnosis of medial fracture of the neck of the femur. There he had received plaster-bandage treatment for about three months. The result was pseudarthrosis.

On admission: The patient's general condition is good, but he complains of pain when walking, and he limps considerably. Trendelenburg positive. Shortening, 4 cm. Roentgen examination shows pseudarthrosis at the middle of the collum, with coxa vara position (Fig. 1).

Feb. 27th, 1933. *Operation (author):* Extra-articular osteosynthesis by own method. Apparently successful reduction of the fracture to better position.

March 20th. Neither plaster-bandaging nor extension has been used after the operation. The patient has been treated partly with constant current through the joint, partly with faradization (tonisator).

May 3rd (about two months after the operation): The patient is able to walk in a go-cart.

May 17th. He walks with the aid of crutches.

June 9th, 1933. He is now completely free from pain, and

walks without the aid of a stick, only with a slight limp owing to the shortening of the leg. The mobility in the hip-joint is somewhat restricted as regards abduction and flexion, but otherwise normal. Trendelenburg negative. Shortening, 3 cm.

In this case a fully satisfactory functional result, and even, so far as can be judged, a beginning of roentgenologically demonstrable osseous healing have thus been obtained, already after three months, merely by nailing, without either opening the joint or freshening up the fracture surfaces. Attempts have been made before to deal with pseudarthroses of the neck of the femur by means of a metal nail, without raelage of the fracture surfaces, but have not turned out well. It might therefore seem downright foolish to venture into a road that beforehand held out so little promise of success. What particularly tempted me to make the attempt nevertheless, was the result I had obtained in an operation for collum fracture,¹⁾ in which, though roentgenological healing was not secured, the functional result, if not ideal, had at least been completely satisfactory; a result which I attributed to that quality of the Smith-Petersen nail that it assures sufficient fixation, even if there be no osseous healing. The result surpassed all my expectations, in that not only the function, as we have seen, was quite satisfactorily restored, but also the bone seems to have healed. I ascribe this partly to the fact that the patient was still in the vigorous age, partly to the circumstance that the pseudarthrosis was relatively fresh.

Fritz Lange has recently published a paper²⁾ in which he, too, reports the successful employment of extra-articular osteosynthesis in cases of pseudarthrosis, likewise in relatively young patients. He uses, however,—instead of the metal nail, which he rejects, and with which he had formerly had bad experiences —»pegging« with transplanted bone, and considers this to be the essential. I believe, though, that if *Lange*, instead of the usual metal spikes or screws, had used the Smith-Petersen nail

¹⁾ The case figuring as no. I in my paper in the *Acta Orthopædica*, vol. III, p. 362 ff.

²⁾ *Zeitschr. f. orthop. Chirurgie*, Bd. LVIII, 1932.



Fig. 1.

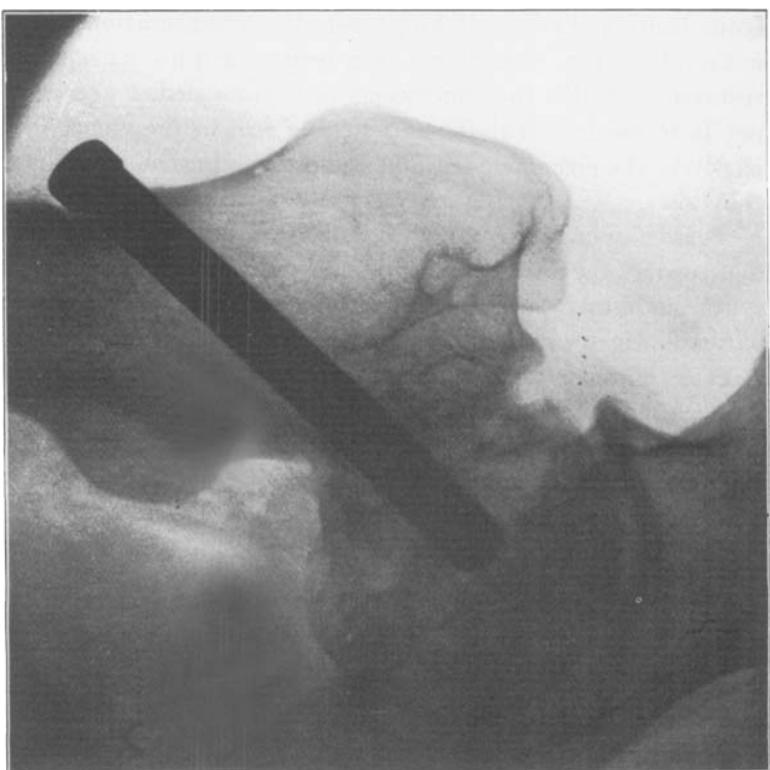


Fig. 2.

of rustfree metal, the results would probably have been just as good as with the transplanted bone. In my opinion, it is the solidity of fixation which the Smith-Petersen nail ensures, together with the fact that, being rustfree, it does not injure the bone, that makes it superior to all the other metal pegs that have been used hitherto. To complete the operation of osteosynthesis by a »drilling« *ad modum Beck* seems to me worth a trial, which, at any rate, I shall make, if I should some day have occasion to deal with another case of the same kind.

I would by no means wish to assert—and especially not on the basis of this one, solitary case—that all, or even any considerable number, of pseudarthroses may be repaired or improved by this simple, and for the patient so relatively little discomforting method, but I think that it might with reason be tried, at least in cases of fairly recent pseudarthrosis in subjects not too far advanced in age.

Note.—Screen-pictures of the patient before and after operation were shown at the meeting of the Northern Orthopedic Association in 1933, at Stockholm.

SUMMARY

The author reports on a case of pseudarthrosis of the neck of the femur which—fourteen months after the lesion had been sustained—was treated by him, with good result, by the method of extra-articular osteosynthesis. He suggests that the method should be tried, at least in cases of fairly recent pseudarthrosis in subjects not too far advanced in age.

RÉSUMÉ

L'auteur rapporte un cas de pseudarthrosis du col du fémur qui — 14 mois après le moment de la lésion — fut traité par lui, avec de bons résultats, par la méthode de l'ostéo-synthèse extra-articulaire. Il propose qu'il soit fait l'essai de cette méthode, au moins dans des cas assez récents de pseudarthrosis sur des sujets qui ne seraient pas trop âgés.

ZUSAMMENFASSUNG

Der Verfasser berichtet über 1 Fall von Pseudarthrosis des Schenkelhalses, den er — 14 Monate nach erlittener Verletzung — mit extraartikulärem Osteosynthesis behandelt und ein gutes Resultat erzielt hat. Er schlägt vor, die Methode wenigstens in einigermaßen frischen Fällen von Pseudarthrosis bei nicht zu alten Personen zu versuchen.