

## ARTHROPLASTY WITH MOORE PROSTHESIS FOLLOWING FEMORAL-NECK FRACTURE

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At the Orthopaedic Clinic, St. Görans Hospital, over a seven year period (1955–1961), 68 arthroplastic operations by Moore's technique were performed for fracture of the femoral neck and its residual conditions. 90 % of the patients were women. The higher age-groups predominated. The average age was 69 years, the oldest patient was 89 and the youngest 45 years old.

Indications for Operation:

1. Irreducible fractures (16 cases)
2. Early displacement of the fracture after nailing (10 cases)
3. Pseudarthrosis (38 cases), and
4. Avascular necrosis of the femoral head accompanied by pain and difficulty in walking (14 cases).

Bed-rest after the operation was about 3 weeks. Length of hospital care was in 6 cases just under 4 weeks and in the great majority (44 cases) 6–8 weeks.

35 cases were followed-up with an observation period of 2–6½ years.

The mortality was 4/68 (6 %), referring to patients aged 84, 82, 76, and 74 years diagnosed as circulatory insufficiency, marasmus plus decubitus (2 cases) and hemiplegia, respectively.

Complications in immediate connection with the operation were subluxation (1 case), subluxation plus fracture of the lesser trochanter (1 case) and the stem of the prosthesis perforating the cortex (1 case). Further complications occurring later included luxation plus infection (1 case), thrombosis (4 cases) and wound infection (3 cases). In 6 of these 11 cases the endresult was good in spite of the complications.

At the follow-up Shepherd's scheme was used to evaluate the result. The scheme included a gradation of

1. the functional capacity
2. the degree of pain, in accordance with Merle D'Aubigné's scheme
3. the mobility determined by Gade's index, in which the movement paths which are more important for function are graded higher than others, and finally
4. the patient's own evaluation.

The results were then estimated as very good and good in 77 %, a figure which agrees very well with the patient's own opinions.

As regards pain, 45 % stated they were quite free from aching and walking pain. If we add those who had slight intermittent pain and pain only when tired, quickly disappearing when resting, this figure is brought to 80 %.

The mobility in almost all cases remained good. All except one could put on shoes and stockings themselves.

In 40 % av the cases Trendelenburg's sign was negative and the patients walked without a limp. Four patients walked with 2 crutches. In 45 % there was no shortening of the leg, as measured from the iliac spine to the medial malleolus.

A good estimate of the functional capacity is obtained from the manner in which these old people manage in their social milieu. 50 % of the patients live alone in one room with a kitchen or kitchenette. They look after their small homes themselves, do their own shopping, and need no assistance in buses and trams. Four live in a pensioners home and are relatively easy to look after.

With regard to the subsequent course 3 patients have had a deterioration, while in the others the condition has remained stationary.

No prosthesis fracture has been recorded. The position of the prosthesis in the bone seems to be stable, but the question is whether or not the prosthesis in these old people with osteoporosis may work loose after a few more years. So far, we have seen 2 cases in which X-ray showed that the prosthesis was loose but in which the result was still good. In one of these the prosthesis had sunk into the femoral shaft and had an enlarged clear zone around the intramedullary stem, and in the other case the prosthesis was seen pumping up and down some millimetres in the medullary cavity. Another complication was a central atrophy in the acetabulum, very pronounced in 1 case and suggested in 2. In these cases a prosthesis with a head of too small diameter had been used. A slightly increased sclerosis of the acetabulum was recorded 4 times. In most cases the prosthesis seemed to be firmly anchored; there was no enlargement of the channel around the intra-

medullary stem and there was increased sclerosis around it an in the upper window on the stem. This observation was verified by the autopsy findings in one case. The patient had been operated on 2 years and 4 months earlier. Solid bone-plugs had grown through the window of the prosthesis which was absolutely firm. A smooth, thin fibrous tissue surrounded the prosthesis.

Naturally, longer observation period and larger series are necessary before a final assesement of the method can be made, but at present it seems to be the method, which is the least ordeal to these old and frail patients.

#### SUMMARY

Over the 7-year period, 1955–1961, 68 Moore arthroplasties were performed on a group of mainly femal patients. The mortality was 6 %. Good results – both subjectively and objectively – were obtained in 77 %. Freedom from pain and a considerable relief of pain were obtained in 80 %. Mobility in the hipjoints was adequate in almost 100 % of the cases.

#### RESUME

Durant une période de sept ans, 1955 à 1961, il a été pratiqué 68 arthroplasties selon la méthode Moore, principalement chez des femmes âgées. Mortalité 6 %. Bons résultats aussi bien subjectivement qu'objectivement chez 77 %. Abolition des douleurs ou soulagement essentiel dans 80 %. Mobilité de l'articulation entièrement bonne dans pratiquement 100 % des cas.

#### ZUSAMMENFASSUNG

Während einer Siebenjahrszeitspanne, 1955–1961, wurden 68 Mooreplastiken an einem überwiegend älteren, weiblichen Klientel ausgeführt. Die Sterblichkeit war 6 %. Ein sowohl subjektiv als auch objektiv gutes Ergebnis wurde in 77 % erzielt. Schmerzfreiheit und wesentliche Schmerzlinderung wurde in 80 % erhalten, gute Beweglichkeit im Gelenk in beinahe 100 %.