

Saddle prosthesis after resection of a para-acetabular chondrosarcoma

A case report

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A case of para-acetabularly localized chondrosarcoma with involvement of the hip was treated by local excision and reconstruction with a saddle endoprosthesis resting at the ileum. At follow-up after 5 years, a spontaneous fusion had developed with good function; there were no signs of local recurrence.

A previously healthy 61-year-old woman was seen in our department in 1983. Her main complaint was increasing pain in the right inguinal area during the past 8 months. Physical examination was normal, as were all the laboratory tests. Standard radiographs of the pelvis revealed a para-acetabular osteolytic lesion with thinning and disruption of the inner cortex, which together with centrally localized calcifications suggested a chondrosarcoma (Figure 1).

Arteriography and CT and radionuclide scans showed involvement of the hip joint. No metastases were found. Chondrosarcoma was diagnosed by needle biopsy. The tumor was classified as a high-grade extracompartmental malignancy IIB, due to the cortical perforation (Enneking et al. 1980). Wide resection of the tumor was performed including the hip joint, spacing the defect temporarily with a Rush pin. Macroscopically, the resected specimen showed extension of the tumor to the subchondral bone of the acetabulum with growth into the central ligamentum teres. Microscopically, the surgical margins were free of tumor. Therefore, the procedure was classified as a wide excision.

After 3 months, the defect was bridged with a saddle endoprosthesis, fixed with bone cement in the proximal femur, and supported by the remnant of the ilium (Nieder 1987). The ischium was approximated to the lesser trochanter. After 3 weeks of balanced traction, the patient was mobilized. After 6 months, full weight

bearing was permitted. Five years later, the patient walks without pain and without the use of any support. There is no difference in leg length. The reconstruction itself acts as a stable painless ankylosis due to the spontaneously formed ischiofemoral and iliofemoral bone bridge.

There is normal knee and ankle mobility, and the Trendelenburg sign is negative. There are no signs of local recurrence or metastasis.

Discussion

After excision of the hip joint, reconstruction is complicated. There are several options, such as iliofemoral or ischiofemoral arthrodesis, allograft replacement, and cemented total hip arthroplasty (Steel 1978, Enneking 1983). After an iliofemoral or ischiofemoral arthrodesis, a difference in leg length usually results. It is not always possible to obtain a painless union of the arthrodesis, and the patient often remains incapable of weight bearing. After using massive allografts, infection is seen in a high percentage of cases (Mankin 1987). In case of a total hip arthroplasty, a stable hip joint cannot always be achieved, and instability with dislocation may follow. Also resection without reconstruction has been reported (Nilsson et al. 1982). The average leg-length discrepancy was 6 cm, and most patients used one or two canes.

Due to the high rate of complications following the previously mentioned modalities, we chose a totally different type of reconstruction using the saddle prosthesis. A stable reconstruction was achieved. No difference in leg length was present. Full weight bearing without pain was possible.

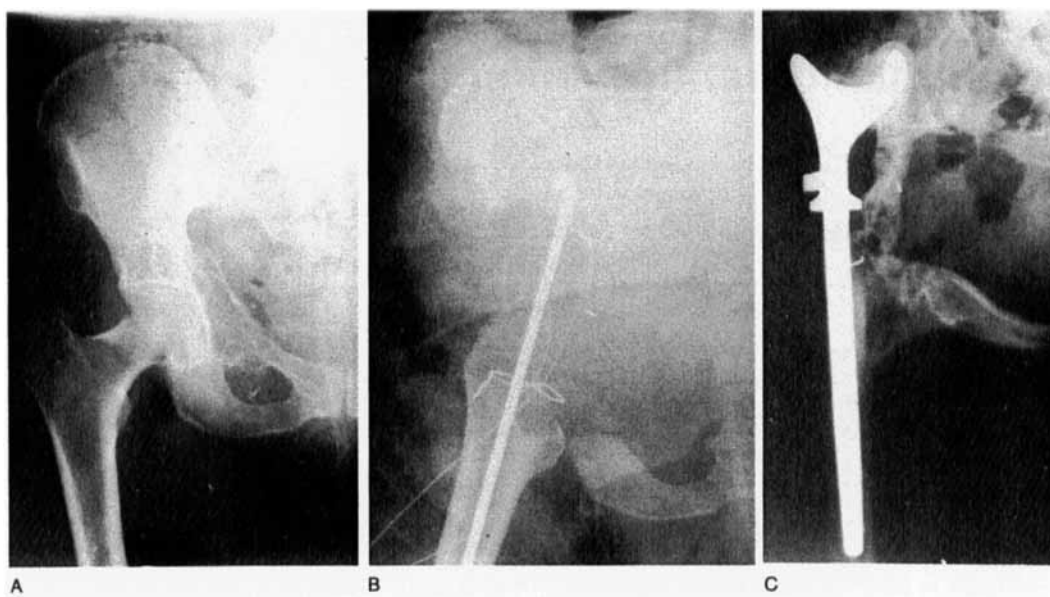


Figure 1. A 61-year-old woman with a chondrosarcoma.

A. Osteolytic lesion with expansion and cortical thinning in the right para-acetabular region. Disruption of the medial cortex.

B. After a wide en bloc excision of the tumor and hip joint, the defect was temporarily spaced by a Rush pin.

C. Five years after the operation. Spontaneously formed ischiofemoral and ileofemoral bone bridge.

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