

# PATELLAR METASTASIS FROM A LARGE BOWEL ADENOCARCINOMA

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**Although bone tumors are often located in the knee area, primary tumors of the patella are rare (6, 8), and patellar metastases even rarer. A few cases were reported in the literature, originating from the breast, lung, kidney, uterine cervix and oesophagus. We report a case, for the first time to our knowledge, of a patellar metastasis from a large bowel carcinoma.**

**Keywords :** metastasis ; patella ; bowel adenocarcinoma.

**Mots-clés :** métastase ; rotule ; adénocarcinome colique.

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## CASE REPORT

Mrs D., a 71-year-old noninsulin-dependant diabetic Caucasian female, underwent a total hysterectomy in April 1987 for a uterine fibroma. In February 1988, she had a partial colectomy for an adenocarcinoma of the large bowel with hepatic and pulmonary metastases.

In July 1989, she developed pain in the left knee, localized to the anterior aspect of the patella. The patient attributed this pain to a fall on the stairs due to diabetic hypoglycemia. The AP and lateral xrays of the knee showed no fractures. In January 1990, the patient consulted for worsening of pain in the left knee, which was constant and accompanied by swelling of the joint. Further xrays of the knee as well as femoropatellar xrays were considered as normal. The knee was immobilized in a plaster cast for 3 weeks. In March 1990, the patient consulted us for the first time with persistent invalidating pain of the left knee. The knee was swollen ; extension was complete, flexion

reached 30°. Tapping of the anterior aspect of the knee was painful. Although in January 1990 xrays, which were considered as normal, showed osteolytic lesions of the middle third of the patella, recent AP, lateral and femoropatellar xrays showed an evolving lesion with osteodensification of the medial patellar wing, aggravating centropatellar osteolysis, and a lytic lesion of the left medial tibial plateau (fig. 1). A 99-Tc isotopic scan showed dense hyperfixation of the left tibial plateau.

A patellectomy was therefore scheduled because of the tableau consistent with a patellar tumor. Surgical exploration via a medial longitudinal incision revealed a patellar tumor invading the medial wing and the synovium. There was also a 2-mm diameter trochlear metastasis. There was no joint effusion. Extensive synovial resection and a patellectomy were performed according to Boyd and Hawkin's technique (3). The anterior pain disappeared the day after surgery. Post-operative radiotherapy of 65 Gray was given for 6 weeks to complement the surgical cure. Pathological examination of the patella, stained with Hematoxyline Eosine Safran (HES) confirmed the diagnosis of a bone metastasis from a well-differentiated large bowel adenocarcinoma (fig. 2). Despite an uneventful postoperative period, the patient died 9 months later of carcinomatosis.

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Fig. 1a

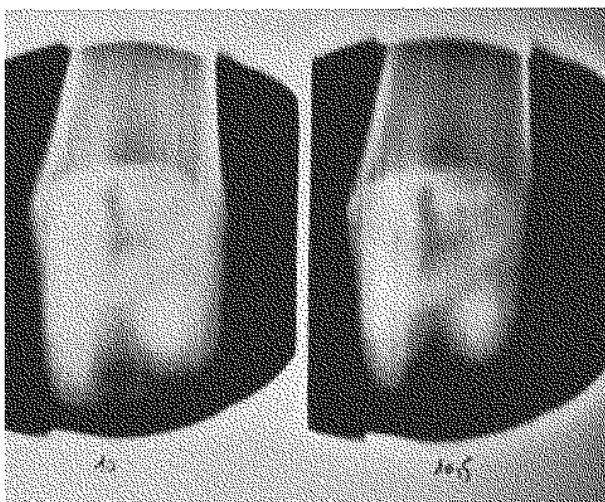


Fig. 1b

Fig. 1. — a) Skyline view of the patella showed centropatellar osteolysis with osteodensification of the medial patellar wing (\*).  
b) AP tomogram showed centropatellar osteolysis.



Fig. 2. — Typical well-differentiated adenocarcinoma of large bowel infiltrating bone lamellae (Gr X 250 HES).

## DISCUSSION

Patellar metastases are rare (4). Review of the literature between 1969 and 1989 did not show any cases of patellar metastases of large bowel origin.

The cause of the pain had been missed for 3 months because of the rarity of bone metastasis of the primary. Several hypotheses could originally have been evoked: trauma, algodystrophy, tuberculous arthritis, but the past medical history of the patient, as well as the patellar osteolytic lesions, involvement of the soft tissues, bone scan fixation, and negative bacteriological examination should have led to the correct diagnosis. Knee swelling was not due to intraarticular fluid, as initially thought, but to the tumoral involvement of the synovium. Although the initial condition was well tolerated, despite a poor prognosis due to generalized metastases, the occurrence of pain, hitherto absent, was the turning point of the disease.

Patellectomy by Boyd's technique (3), as well as radiotherapy, were a simple palliative treatment which avoided prolonged plaster cast immobilization and improved the quality of the remaining life of the patient.

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### SAMENVATTING

*P. URVOY, H. MESTDAGH, E. BUTIN, M. LECOMTE-HOUCHE, C. MAYNOU. Patellaire metastase van een belangrijke darmadenocarcinoom.*

Ofschoon meerdere bottumoren t.h.v. de knie gelocaliseerd zijn, blijven de primaire tumoren van de patella zeldzaam en de patellaire metastasen nog meer. Enige gevallen werden in de literatuur beschreven, secundair aan een tumor van de borst, de long, de nier, de baarmoederhals of de slokdarm. De auteurs beschrijven één geval, het eerste bij hun weten, van een patellaire meta-

stase, afkomstig van een belangrijke darmadenocarcinoom.

### RÉSUMÉ

*P. URVOY, H. MESTDAGH, E. BUTIN, M. LECOMTE-HOUCHE, C. MAYNOU. Métastase rotulienne d'un adénocarcinome colique.*

Quoique les tumeurs osseuses, localisées au genou, ne soient pas rares, une tumeur primaire de la rotule reste exceptionnelle et les métastases à localisation rotulienne encore plus. Quelques cas de métastases rotuliennes ont été décrits dans la littérature, notamment d'origine mammaire, pulmonaire, rénale, utérine et œsophagienne. Les auteurs présentent un cas, à leur connaissance le premier publié, d'une métastase rotulienne d'un adénocarcinome colique.