

**PP-040****Loosening in tumoral megaprosthesis after primary tumors of the femur****L. Leite**, D. Soares, P. Leite, P. Serrano, P. Neves, M. Silva, P. Cardoso*Hospital Santo Antonio, Oporto, Portugal*

**Introduction:** The reconstruction of the femur using tumoral prosthesis after tumor resection is a surgical challenge. The function reacquired is usually satisfactory. However, the increase in survival reported in these patients, must leave the orthopedic surgeon aware of the high potential for complications in the short and medium term.

**Objectives:** Two cases report.

**Methods:** Two cases of sarcoma (parosteal osteosarcoma and fibrosarcoma) of the distal femur which surgical treatment was excision and total knee replacement with megaprosthesis of "rotating hinge" The prosthesis had a cemented stem with a porous ring in the transition stem-prosthesis. It was found loosening and proximal migration of the prosthesis after 40 and 33 months, respectively. In the first case the solution was a total femur prosthesis and in the second one was the review with a new proximal cemented and screwed stem.

**Results:** Great functional outcome in both cases, with no evidence of recurrence of injury.

Despite tumoral megaprosthesis be a great solution for treating bone tumors, is described a high percentage of complications in a short and medium term. Excess stress applied to the bone-cement interface and articulation seems to result in early osteolysis and component wear. The first megaprosthesis models without "rotating hinge" only allowed the movement of flexion and extension of the knee, and complications were recorded elevated. To solve this problem have added new modules that allow axial rotation thus dissipating the forces transmitted to the bone - cement interface and cement - prosthesis. The latest models incorporate features that offer improved torsional stability for fixation, as well as provide a better link between the "rotating hinge" and the tibial component. In literature these models show promising results in the medium term. However, in the presented cases, complications were more precocious than the results of the current literature, perhaps due to the fact of patients have a high stature, with a very good initial functional result allowing them to normal gait, without restrictions on the activities of daily life.

**Conclusions:** Despite the drama, the solutions seemed appropriate and functionally satisfactory. The case of revision with cemented and screwed stem can not be final yet, and shall be required a reintervention using the total hip replacement of the femur.

**Keywords:** Megaprosthesis; Loosening; Total Femur Replacement