

Very long-term follow-up of composite prostheses after periacetabular resection

Delepine F¹, Delépine G,¹ Clinique du parc imperial 06000 Nice France

Objectives: Internal hemipelvectomy followed by acetabulum reconstruction is a very demanding procedure. In published series, 5-year life expectancy rarely exceeds 50%. So, very few reports give long term results. We present long-term results with composite innominate prosthesis with total hip prosthesis in 23 patients.

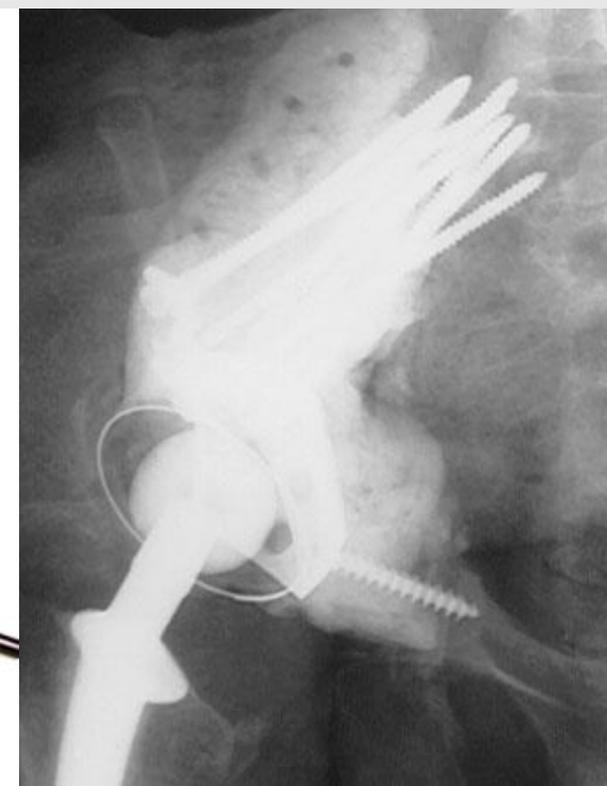
The hand on innominate prosthesis

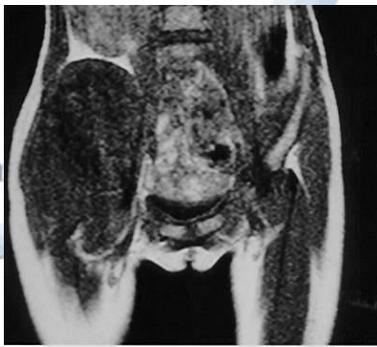
described in 2003
(Sarcoma 2003 7,19-
27) is made of a
titanium cup, a set of
long titanium screws
and 2 or 3 packs of
antibiotics loaded
cement.

Anchorage Screws



Positining Screws





Patients

- Between 1990-2007, **84 patients** with peri acetabular bone sarcoma (40), or metastases (44) were treated by internal hemipelvectomy followed by this reconstructive procedure. Resections included 4 zone 2, 6 zone 2+3, 9 zones 2+1, 3 zones 2+1+4, and 1, zones 1+2+3.

Only 23 survivors (20/40 sarcomas, 3/44 metastases) could be followed more than 10 years. Histology : CS: 8, OS : 5, Ewing: 5, MFH: 1, anaplastic :1, renal cell carcinoma 2, thyroid 1.

Postoperative complications included 1 deep infection (before we used vancomycin loaded cement) , 6 hip prosthesis dislocations (26%) (retentive cup is mandaratory), 2 neurologic palsies.

Solitary metastase from kidney carc.



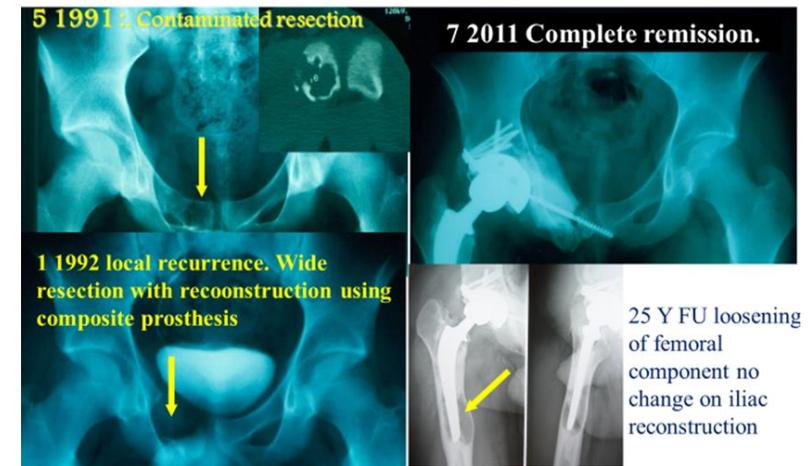
- Patient aged 45 years solitary metastase from kidney. primary tumor resected. Metastase primarily treated with radiotherapie.progressive disease. Resection 18Y FU. 1 reoperaion for polyethylene wear.

Thyroid Carcinoma.

Treatment of liac lesion with composite proshesis. 18 years after resection : No length discrepancy excellent acceptance,flexion 110° illimited walking without support .Little pain.



Grade 1 Chondrosarcoma



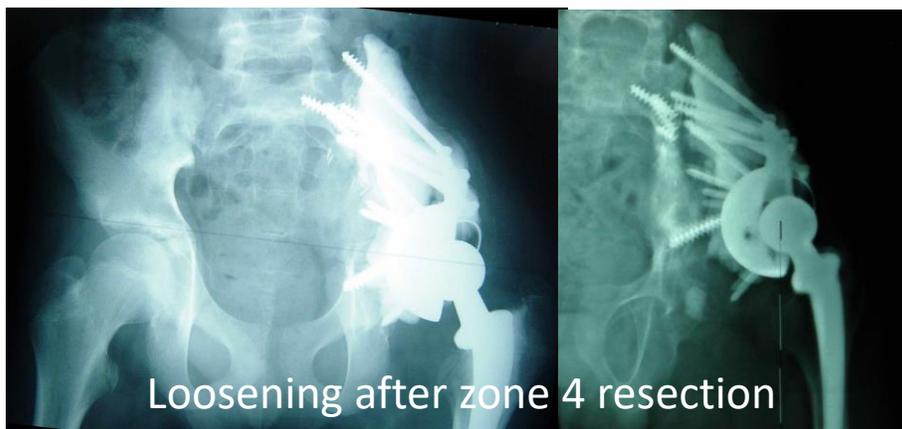
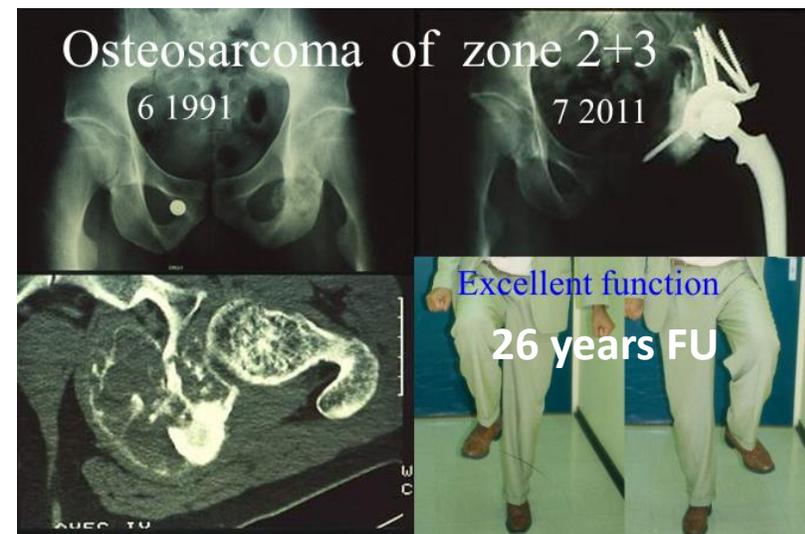
With a **Median FU 18,5 years** (133- 301 months)17 p (73 %) had to be re operated. Late complications were 2 deep infections, 8 polyethylene wears and 8 loosening (5 iliac, 3 femoral).

Results

The mean functional result, rated according modified Enneking's grading system, was 80%. Result similar to those described in the literature for custom made innominate prosthesis and better than those of published alternative reconstructive procedures.

Conclusions. The **immediate weight bearing** and the **durability** of such procedure plea for using it after **acetabulum resection of zone 2 and 3** (we did not observed any loosening of the iliac reconstruction).

Such a procedure can also be used after total iliac wing resection even when including zone 4. But in this location loosening is frequent and pleas for **reinforcing the reconstruction with the head and neck of femur** when there are free of tumor as advocated by Puget.



Loosening after zone 4 resection



ISOLS 2019

**20th General Meeting of
International Society
of Limb Salvage**