

Total humeral replacement for sarcoma.

Considerations about 2 cases.

Delépine G¹., Delépine F²., Markovska

*¹Oncologic pediatric unit Raymond Poincaré
Hospital Garches France*

*²Clinique du parc impérial 28boulevard du
tzarevitch06045 Nice France*



CENTRE HOSPITALIER
UNIVERSITAIRE
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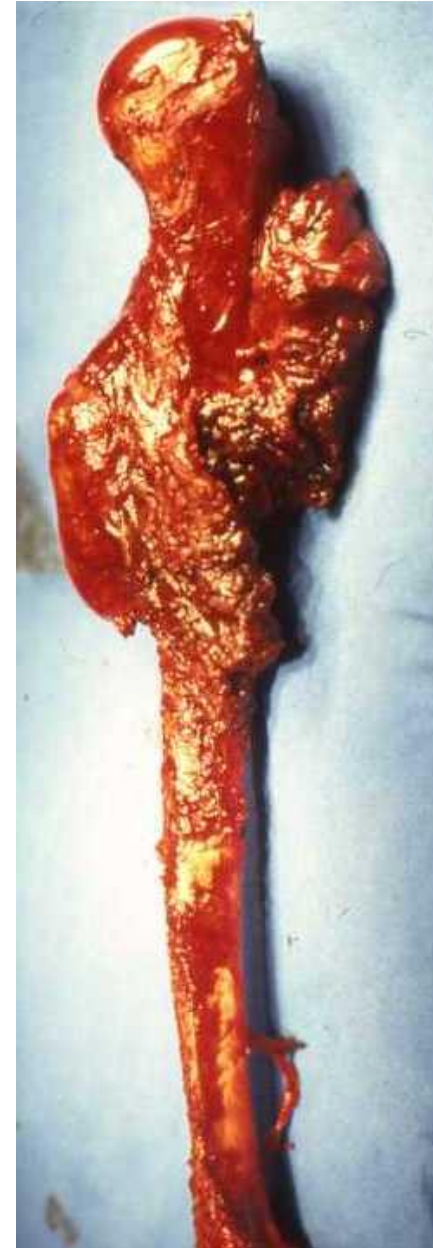
104 Bd Raymond-Poincaré
92380 Garches
Standard : 01.47.10.79.00
contact-poincaré.garches
@rpc.ap-hop.paris.fr

www.nicoledelepine.fr



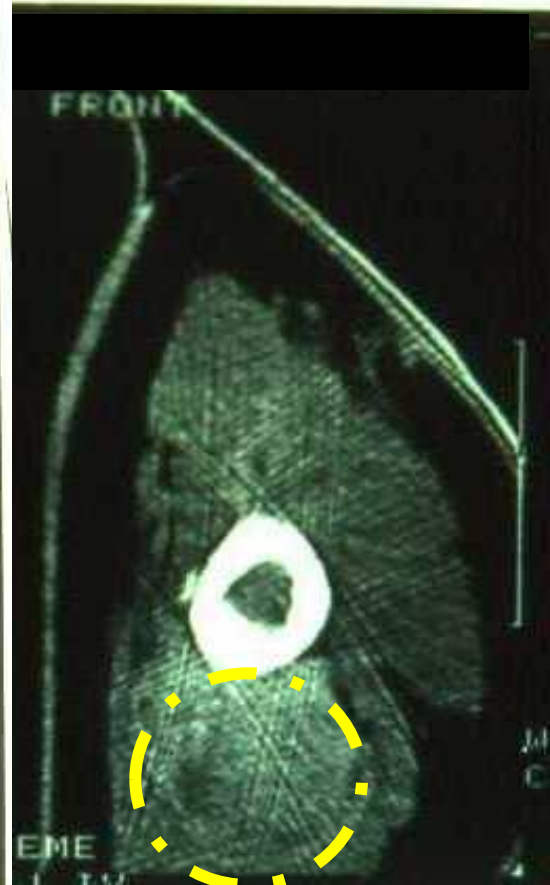
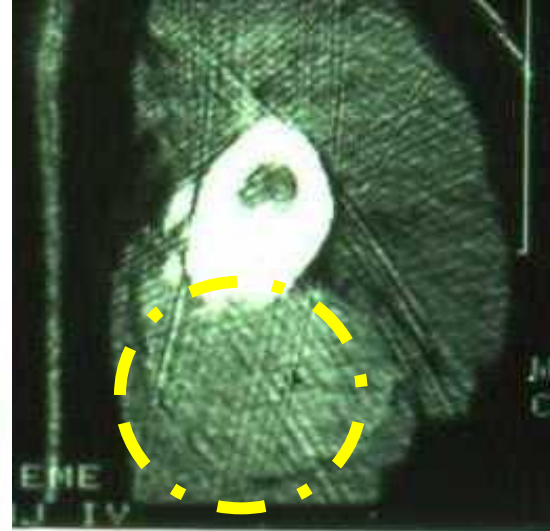
Objectives

With effective chemotherapy the gold standard for limb salvage is wide resection. Consecutively primary total humeral resection is nowadays rarely indicated. Two cases, one with very long follow up permit us to consider the aspects of reconstruction.



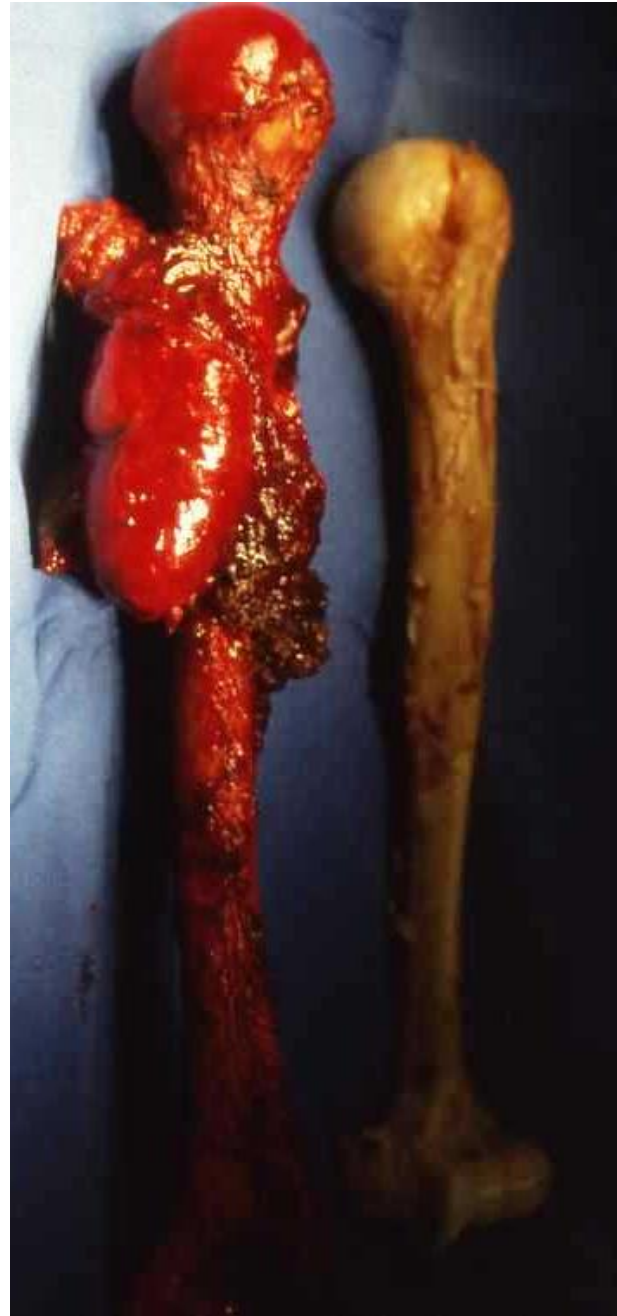
Case 1, 1986/3

- A 35 year old man consult us for pain in the left arm. Ct showed a tumour invading the whole humerus.
- Open biopsy confirms a low grade fibrosarcoma.



Case 1, 1986/6

- Total humeral resection was performed.
- Reconstruction used an allograft armed with nail and cement.



Case 1, 1987

- 1 year FU
- a sub capital fracture of the allograft compelled us to put an humeral head prosthesis on the nail.



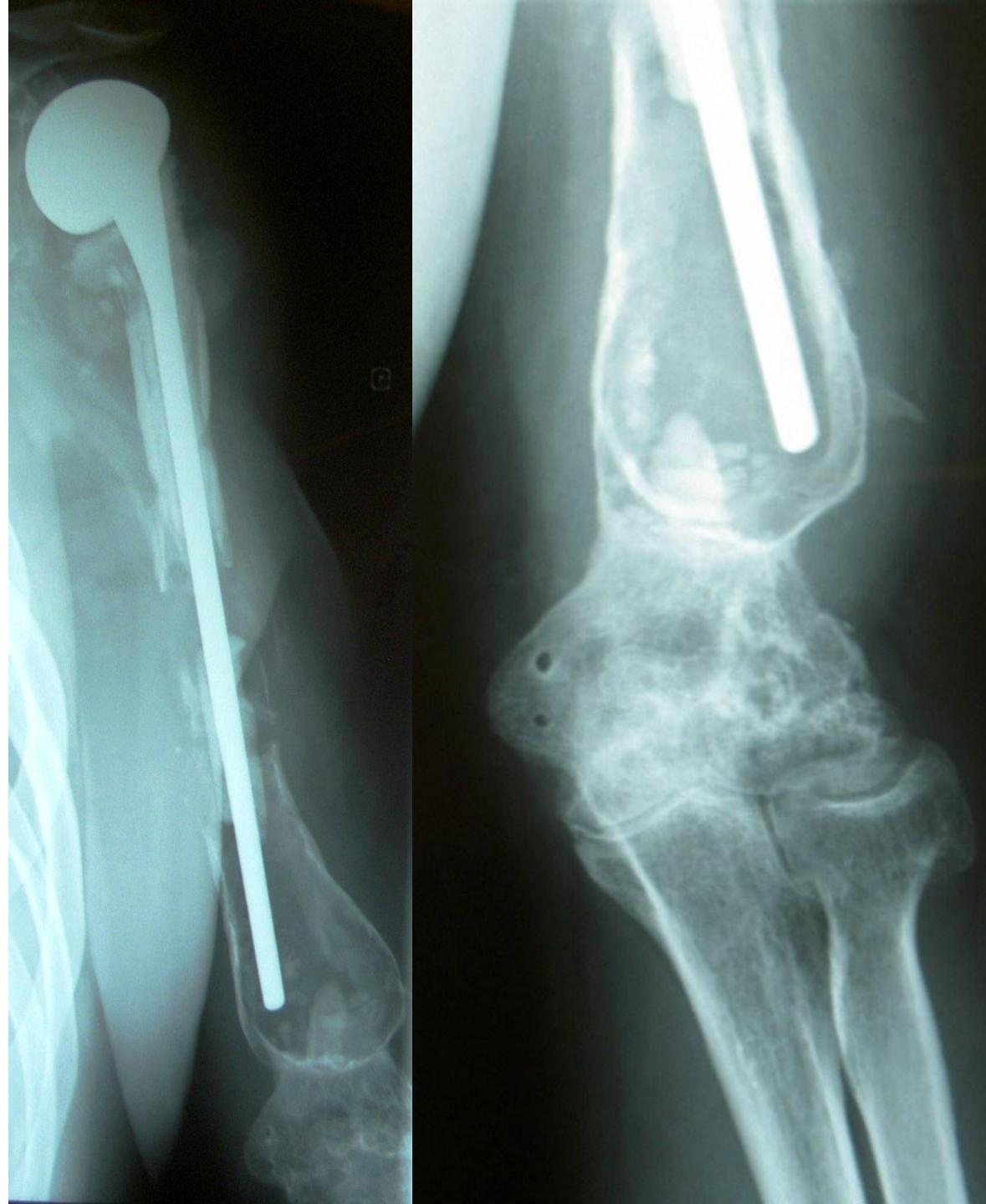
Case 1, 1993

- 7 years FU
- resorption of proximal allograft resulted in fracture of the nail.
- Reconstruction used a an humeral prosthesis with long stem inserted into the allograft.



Case 1 , 2003

- 17 y FU
- Heavy pains and instability of arm appeared with the loosening of the prosthesis due to the progressive resorption of allograft



2003

- We performed a total humeral prosthesis with
- an elbow hinge prosthesis
- and a constrained shoulder component.



2012/02 (25 years FU)

- patient in first remission is cured.
- According to Enneking's score function is rated good
- Patient works as police officer.



Case 2 January 2010

- a boy of 17
- comes for a pathological fracture of the proximal part of right humerus.
- Without biopsy he is treated by nailing from the elbow.



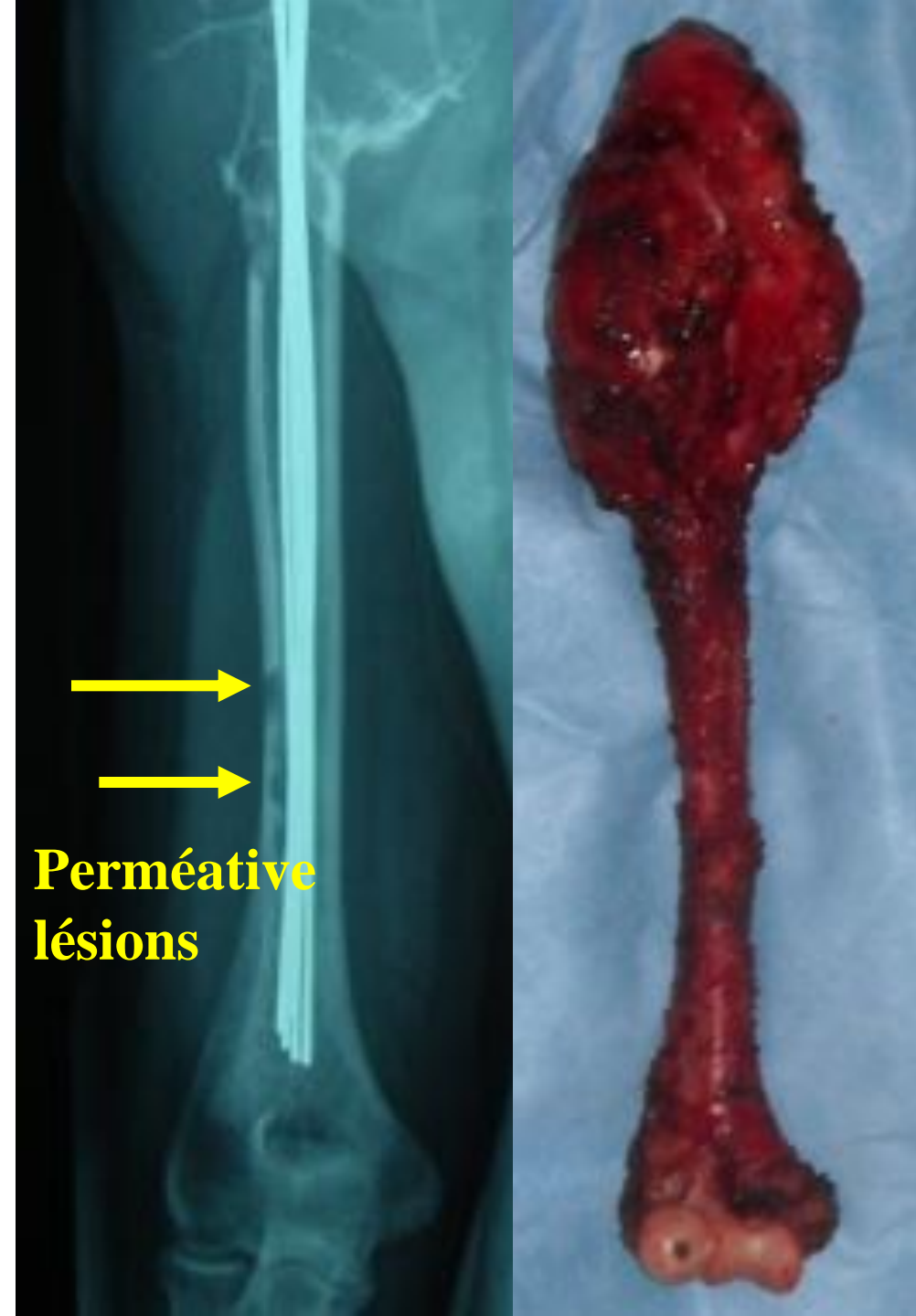
Case 2 June 2010

- 6 months FU
- The fracture healed
- But pain and bone swelling increased.



Case 2. 2010/12

- 1 year FU
- An open biopsy shows a telangiectasic osteosarcoma.
- As nailing disseminated the tumour throughout the diaphysis, extratumoral surgery necessitated total humerus resection
- with resection of axillary nerve.



Case 2

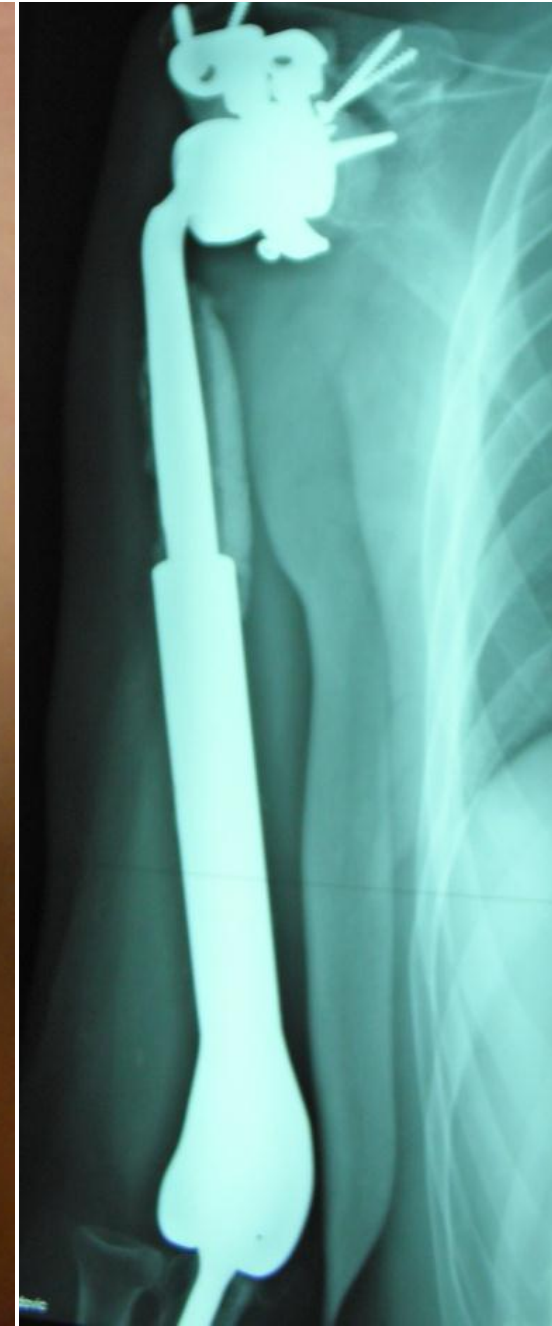
- Replacement used a composite prosthesis with an upper humeral long stem prosthesis inserted in an wide elbow custom made prosthesis locked with a high dose Vancomycine loaded acrylic cement (8 grams of vancomycine in 80 grams of metacrylate).



Case 2

- Post operative dislocation of shoulder compelled to re operate.

To put a constrained component of the shoulder prosthesis (after completion of chemotherapy).



Case 2 2012/02

- 2 year FU
- the patient is in first remission.
- Esthetical aspect of limb is nice.
- According to Enneking's score function is rated good



Comments

- Despite the technical difficulties total humeral replacement give much better function than forequarter amputation of upper limb.
- Adding high dose Vancomycine may help in decreasing the infection risk.

Conclusions

- These observations plea for primary reconstruction by humeral prosthesis rather than by allograft.
- We prefer a composite prosthesis more flexible
- A constrained shoulder prosthesis seems necessary