

CAS CLINIQUE IOA

**J.Druon, G.Gras, S.Floch,
L.Bernard, P.Rosset.**

Services d'Orthopédie 1 & 2
Service de Médecine Interne et Maladies Infectieuses

7ème Journée Scientifique du CRIOGO
4 Novembre 2016

PTG charnière septique

- 67 ans, 3^e changement prothétique.
- Altération majeure du stock osseux.
- Sepsis chronique fistulisé.
- germe = staph coagulase nég.
- Appareil extenseur OK.
- Couverture cutanée OK.

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Series: 9999



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Que proposez vous ?

1/ Lavage de la prothèse.

2/ changement en 1 temps.

3/ changement en 2 temps.

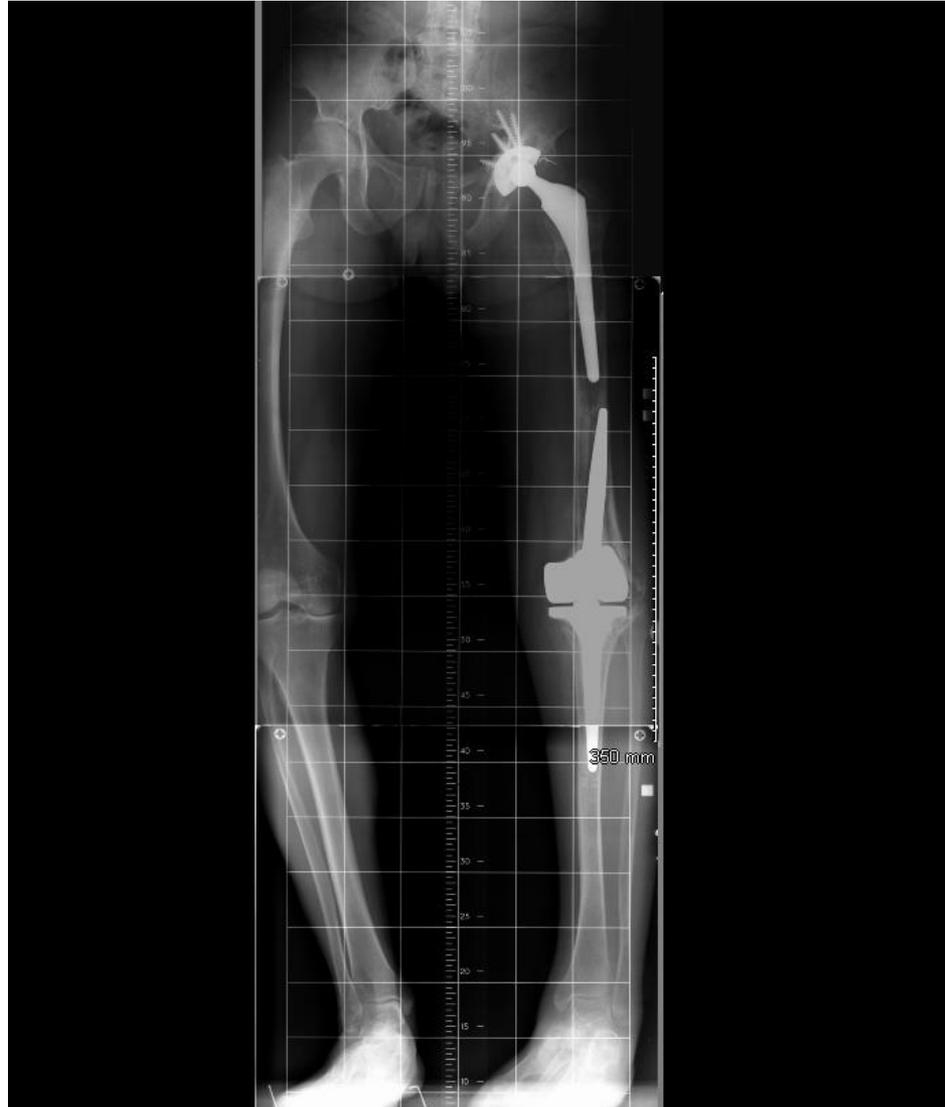
4/ arthrodèse du genou (sur FE ou clou ?).

5/ amputation.

6/ Fistulisation/antibiothérapie suppressive.

7/ autre traitement ?

ça se complique...ancrage proximal impossible !
(prélèvements PTH négatifs)



Que proposez vous ?

1/ amputation (à quel niveau ?)

2/ fistulisation/antibiothérapie suppressive

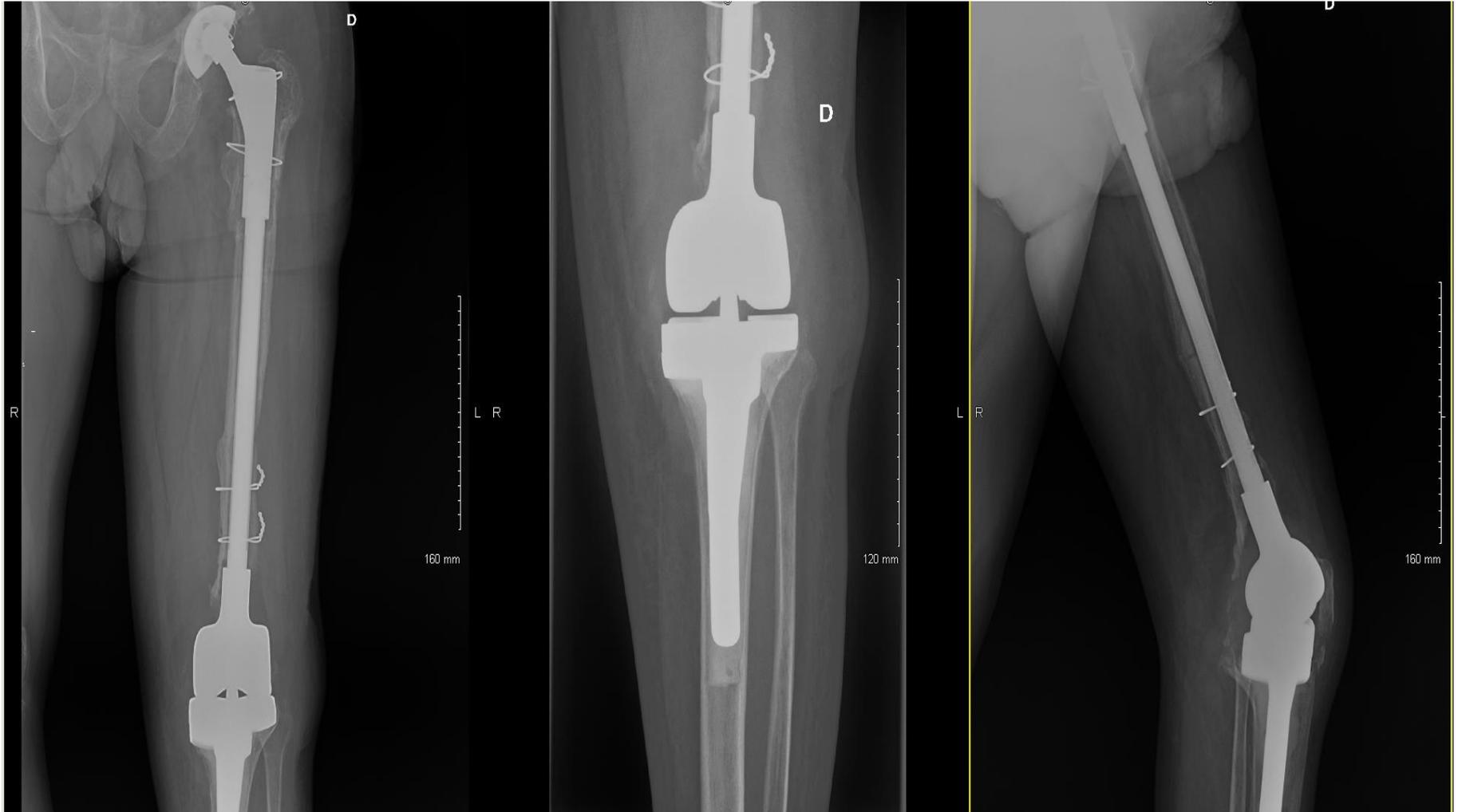
3/ autre traitement ?

???

Changement prothétique en 2 temps



fémur total recouvert d'argent



Résultats à 1 an

- Absence de récurrence septique (CRP=2).
- Antalgiques = 0.
- PDM=1Km avec 1 CB.
- AMP long et stable.
- Genou = 0/0/70.

Résultats à 2 ans

- Douleurs tibiales
- Descellement tibial
- Fistulisation spontanée
- Ponctions : germe identique
- => récurrence de l'infection

Que proposez vous ?

1/ amputation (à quel niveau ?)

2/ fistulisation

3/ antibiothérapie suppressive

3/ autre traitement ?

Implants de reconstruction revêtus d'argent
pour la prise en charge
des **grandes destructions osseuses**
d'origine **septique** :
revue de 16 cas à 1 an de recul minimum.

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CHU Tours CRIOGO.

Pandiaphysite fistulisée et ostéoarthrite du genou par contiguïté (staph coagulase -) ...



1^{er} temps : excision « carcinologique » fémorectomie/Spacer



Spacer sans ATB

Reconstruction par fémur total recouvert d'argent

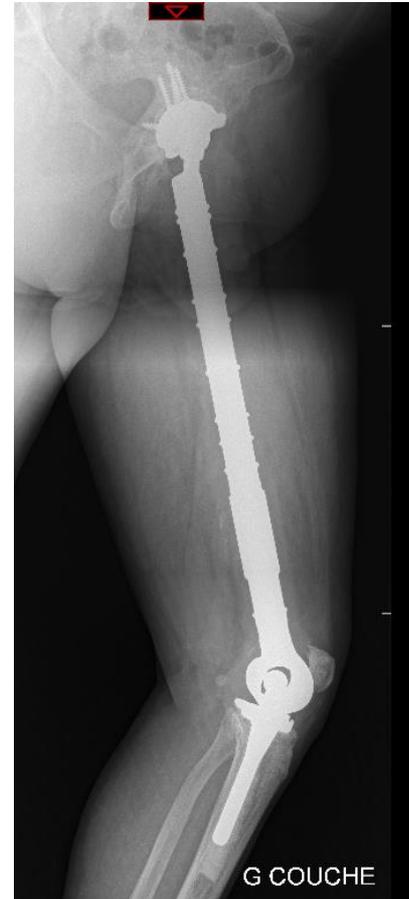
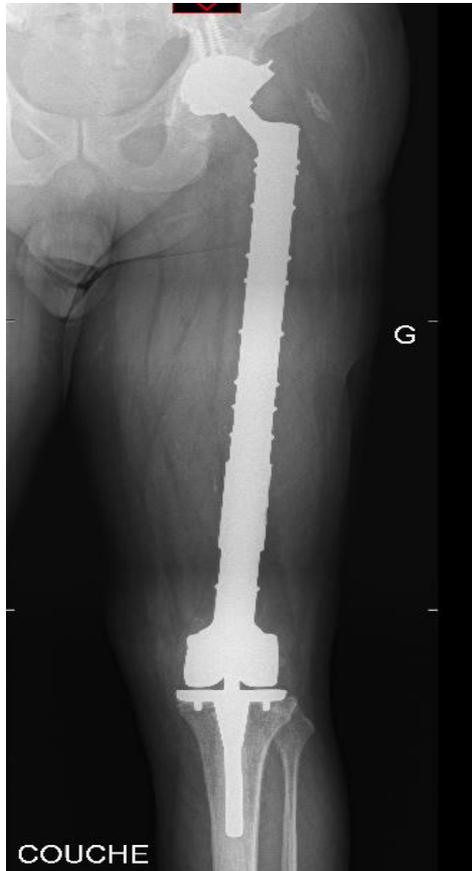


A 2 ans : absence de récurrence infectieuse, PDM = 500m avec 2CB.

Série rétrospective monocentrique

- **16 patients** (10 hommes 6 femmes).
- recul moyen : **38,5 mois**, (15 à 79 mois, 10>à 2 ans).
- âge moyen : **64 ans** (29 à 81 ans).
- Microbiologie : 3 polymicrobiens, 7 SAMS, 8 SCN.
- Toujours en 2 temps, spacer sans ATB.

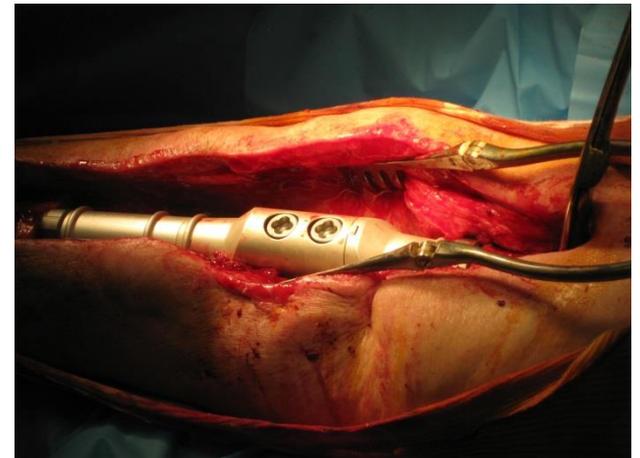
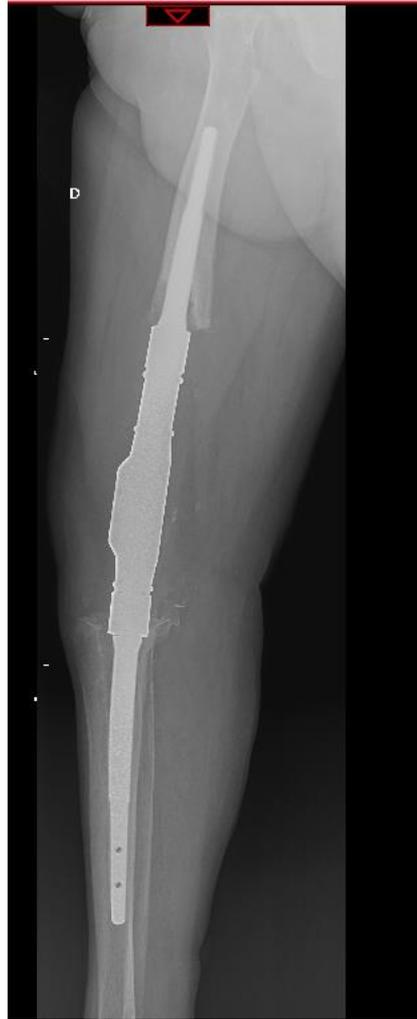
4 fémurs totaux :



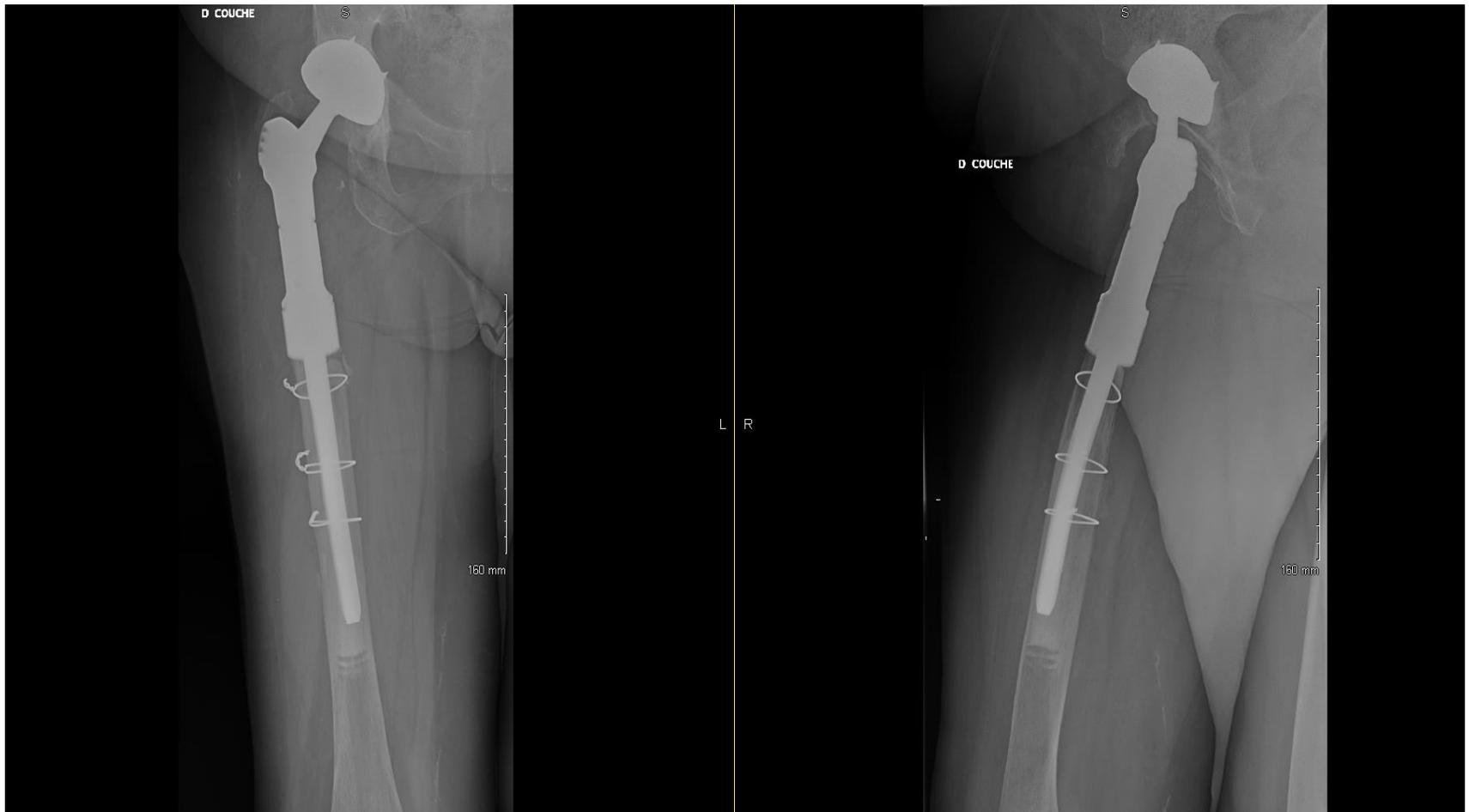
3 extrémités inférieures fémurs :



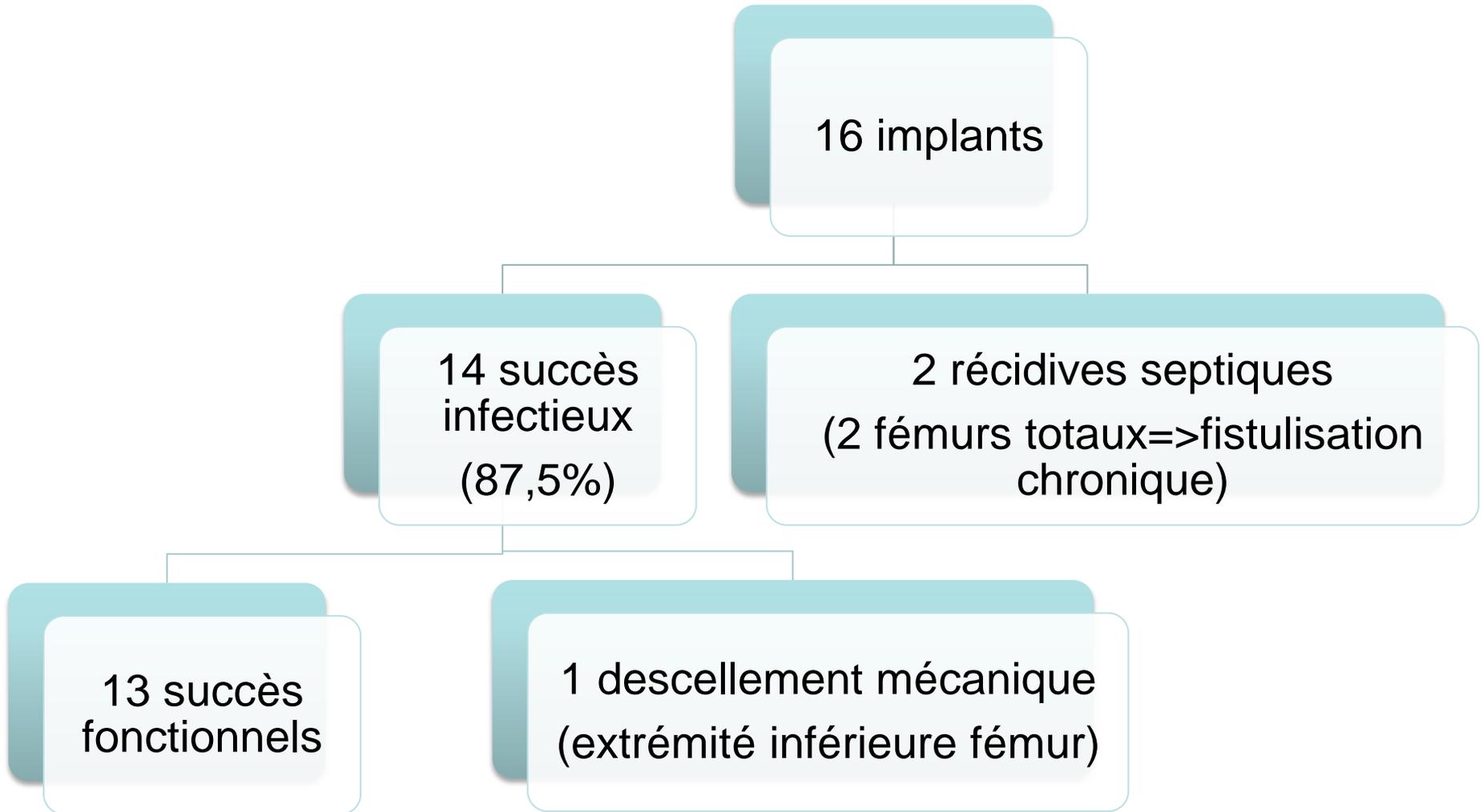
5 clous d'arthrodèse :



4 extrémités supérieures de fémur :



Résultats



Argent et prothèses de reconstruction

Reduction of Periprosthetic Infection With Silver-Coated Megaprotheses in Patients With Bone Sarcoma

JENDRIK HARDES, MD,^{1*} CHRISTOF VON EIFF, MD,² ARNE STREITBUERGER, MD,¹ MAURICE BALKE, MD,¹ TYMOTEUS BUDNY, MD,¹ MARCEL P. HENRICH, MD,¹ GREGOR HAUSCHILD, MD,¹ AND HELMUT AHRENS, MD¹

¹Department of Orthopedics and Tumor Orthopedics, Münster University Hospital, Münster, Germany

²Institute of Medical Microbiology, Münster University Hospital, Münster, Germany

Background and Objectives: The placement of megaprotheses in patients with bone sarcoma is associated with high rates of infection, despite prophylactic antibiotic administration. In individual cases, secondary amputation is unavoidable in the effort to cure infection.

Methods: The infection rate in 51 patients with sarcoma (proximal femur, n = 22; proximal tibia, n = 29) who underwent placement of a silver-coated megaprosthesis was assessed prospectively over a 5-year period, along with the treatment administered for infection. The infection rate was compared with the data for 74 patients in whom an uncoated titanium megaprosthesis (proximal femur, n = 33; proximal tibia, n = 41) was implanted.

Results: The infection rate was substantially reduced from 17.6% in the titanium to 5.9% in the silver group. Whereas 38.5% of patients in the titanium group ultimately had to undergo amputation when periprosthetic infection developed, these mutilating surgical procedures were not necessary in the study group.

Conclusions: The use of silver-coated prostheses reduced the infection rate in the medium term. In addition, less aggressive treatment of infection was possible in the group with silver-coated prostheses. Further studies with longer term follow-up periods and larger numbers of patients are warranted in order to confirm these encouraging results.

J. Surg. Oncol. 2010;101:389–395. © 2010 Wiley-Liss, Inc.

Argent et prothèses de reconstruction



■ ONCOLOGY

Retrospective evaluation of the incidence of early periprosthetic infection with silver-treated endoprostheses in high-risk patients

CASE-CONTROL STUDY

We conducted a **case-control** study to examine the merit of silver-coated tumour prostheses. We reviewed 85 patients with Agluna-treated (silver-coated) tumour implants treated between 2006 and 2011 and matched them with 85 control patients treated between 2001 and 2011 with identical, but uncoated, tumour prostheses.

In all, 106 men and 64 women with a mean age of 42.2 years (18.4 to 90.4) were included in the study. There were 50 primary reconstructions (29.4%); 79 one-stage revisions (46.5%) and **41 two-stage revisions for infection (24.1%)**.

The overall post-operative infection rate of the silver-coated group was 11.8% compared with 22.4% for the control group ($p = 0.033$, chi-square test). A total of seven of the ten infected prostheses in the silver-coated group were treated successfully with debridement, antibiotics, and implant retention compared with only six of the 19 patients (31.6%) in the control group ($p = 0.048$, chi-square test). Three patients in the silver-coated group (3.5%) and 13 controls (15.3%) had chronic periprosthetic infection ($p = 0.009$, chi-square test).

The overall success rates in controlling infection by two-stage revision in the silver-coated group was 85% (17/20) compared with 57.1% (12/21) in the control group ($p = 0.05$, chi-square test). The Agluna-treated endoprostheses were associated with a lower rate of early periprosthetic infection. These silver-treated implants were particularly useful in two-stage revisions for infection and in those patients with incidental positive cultures at the time of implantation of the prosthesis.

Debridement with antibiotic treatment and retention of the implant appeared to be more successful with silver-coated implants.

Cite this article: *Bone Joint J* 2015;97-B:252-7.

H. Wafa,
R. J. Grimer,
K. Reddy,
L. Jeys,
A. Abudu,
S. R. Carter,
R. M. Tillman

*From The Royal
Orthopaedic
Hospital NHS Trust,
Birmingham, United
Kingdom*

■ H. Wafa, MSc (Orth), MD,
FRCSEd(Tr & Orth), Consultant
Orthopaedic Surgeon
Glasgow Royal Infirmary, 84,
Castle Street, Glasgow, G4 0SF,
UK.

■ R. J. Grimer, DSc, FRCS
(Trauma & Orth), Professor
■ L. Jeys, FRCS(Tr&Orth),
Consultant Orthopaedic
Surgeon

Argyrisme ?



Lack of toxicological side-effects in silver-coated megaprotheses in humans

Jendrik Hardes^{a,*}, Helmut Ahrens^{a,1}, Carsten Gebert^a, Arne Streitbueger^a, Horst Buerger^b, Michael Erren^c, Andreas Gungel^d, Christian Wedemeyer^c, Guido Saxler^c, Winfried Winkelmann^a, Georg Gosheger^a

^aDepartment of Orthopaedics, University of Muenster, Albert-Schweitzer-Street 33, 48149 Muenster, Germany

^bInstitut für Pathologie, Husener Street 46 a, 33098 Paderborn, Germany

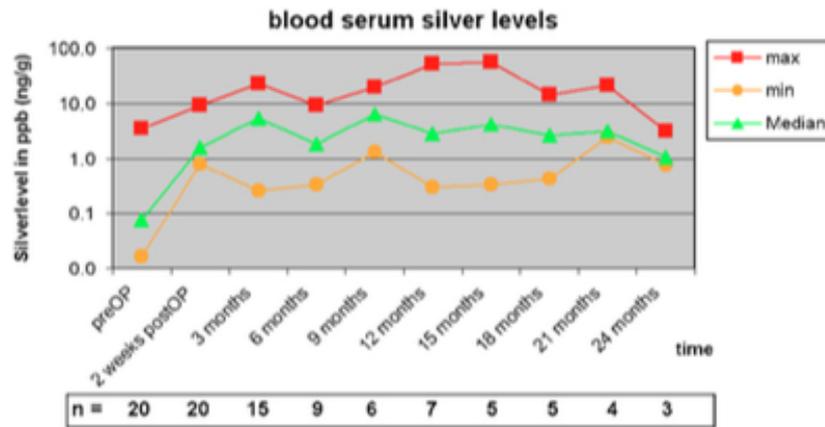
^cInstitute of Clinical Chemistry and Laboratory Medicine, University of Muenster, Albert-Schweitzer-Street 33, 48149 Muenster, Germany

^dEnvironmental Specimen Bank for Human Tissues, University of Muenster, Domagkstr. 11, 48149 Muenster, Germany

^eDepartment of Orthopaedic Surgery, University of Duisburg-Essen, Hufeland Street 55, 45122 Essen, Germany

Received 26 January 2007; accepted 19 February 2007

Available online 3 March 2007



C° Ag normale < 200 ppb

Toxique > 300 ppb

Série (n=20) < 100 ppb

Argyrisme ?



■ ONCOLOGY

Argyria following the use of silver-coated megaprotheses

NO ASSOCIATION BETWEEN THE DEVELOPMENT OF LOCAL ARGYRIA AND ELEVATED SILVER LEVELS

M. Glehr,
A. Leithner,
J. Friesenbichler,
W. Goessler,
A. Avian,
D. Andreou,
W. Maurer-Ertl,
R. Windhager,
P-U. Tunn

From Medical
University of Graz,
Graz, Austria

The aims of this study were to evaluate the incidence of local argyria in patients with silver-coated megaprotheses and to identify a possible association between argyria and elevated levels of silver both locally and in the blood. Between 2004 and 2011, 32 megaprotheses with silver coatings were implanted in 20 female and 12 male patients following revision arthroplasty for infection or resection of a malignant tumour, and the levels of silver locally in drains and seromas and in the blood were determined. The mean age of the patients was 46 years (10 to 81); one patient died in the immediate post-operative period and was excluded.

Seven patients (23%) developed local argyria after a median of 25.7 months (interquartile range 2 to 44.5). Patients with and without local argyria had comparable levels of silver in the blood and aspiration fluids. The length of the implant did not influence the development of local argyria. Patients with clinical evidence of local argyria had no neurological symptoms and no evidence of renal or hepatic failure. Thus, we conclude that the short-term surveillance of blood silver levels in these patients is not required.

Cite this article: *Bone Joint J* 2013;95-B:988–92.

Conclusions

- Faible recul.
- Indication : sauvetage de membre, alternative à l'amputation.
- Argyrisme : à surveiller.
- Coût : 18000 € pour fémur total