

Periprosthetic Joint Infection: Surgical Management, Prevention

Colloque AFISO
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LIEGE

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Infection rate: 1 to 3% (increasing in the following years). What do you do?



« The operation has really shifted toward the young »:increasing risk of subsequent revision

2A FRIDAY, FEBRUARY 10, 2012 USA TODAY

Baby Boomers boost knee replacements

New report will help illustrate 'health burden' of the surgeries

By Janice Lloyd
USA TODAY

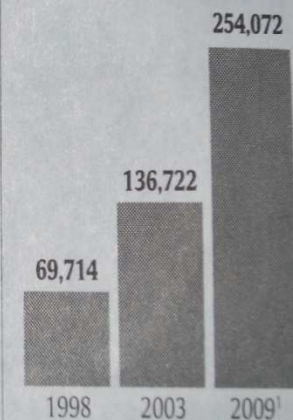
A soaring demand for new knees from aging Baby Boomers wanting to dance through Zum-

latest year for which statistics are available.

"The operation has really shifted toward the young," says Losina, co-director of the orthopedics and arthritis center at

Rising demand for new knees

Demand for knee replacements among ages 45-64 has tripled since 1998:



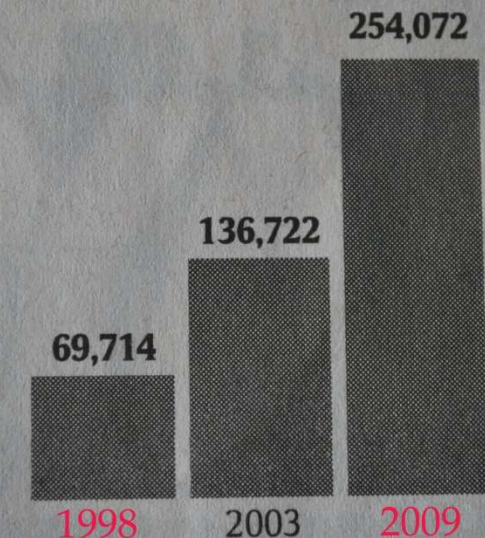
1 - Most recent data available.

Source: Agency for Healthcare Research and Quality

By Frank Pompa, USA TODAY

Rising demand for new knees

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Source: Agency for Healthcare Research and Quality

Descellement aseptique 19%, Douleur 17%
Usure du polyéthylène 12%, Instabilité 11%,
Infection 10%

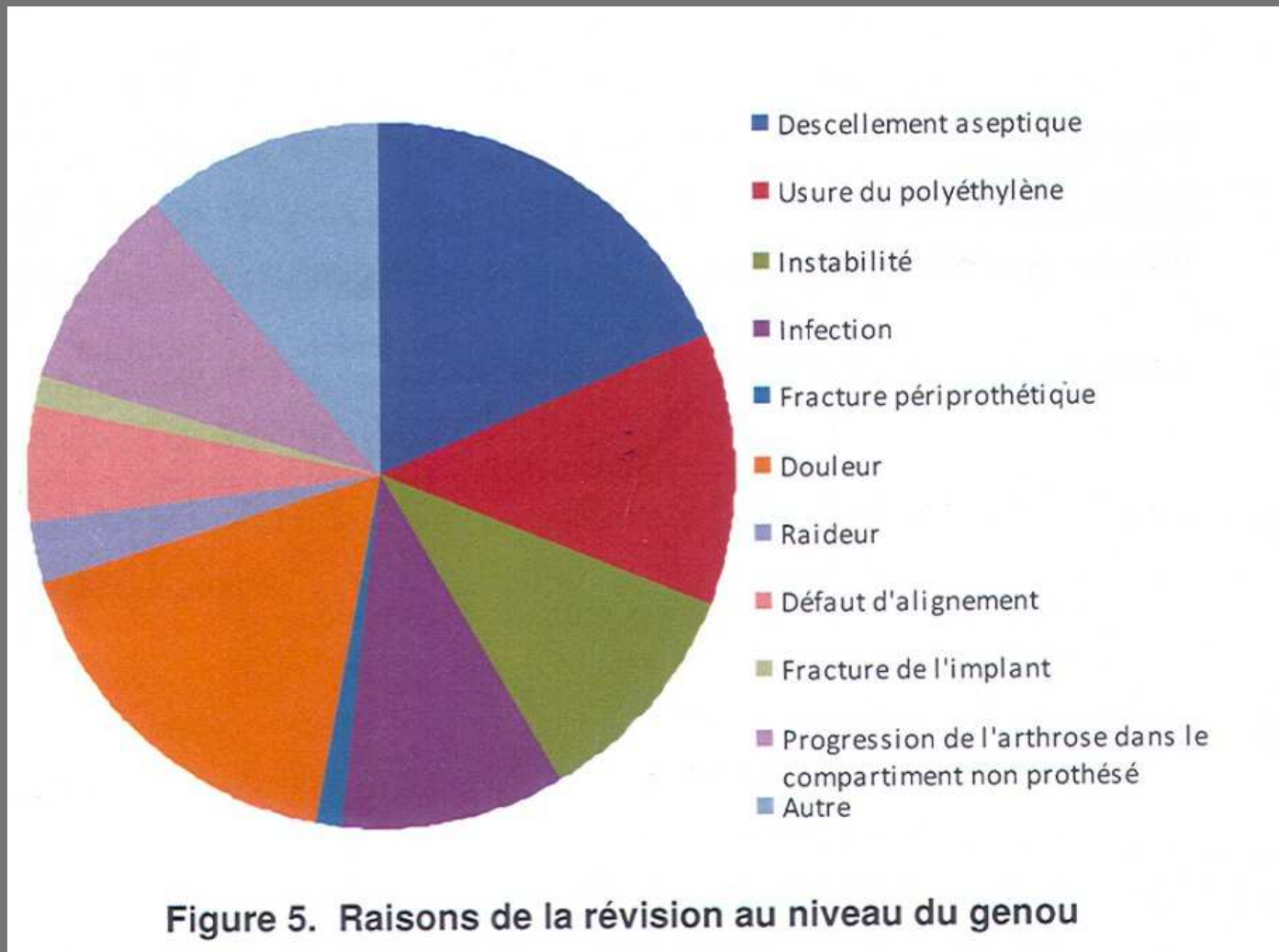


Figure 5. Raisons de la révision au niveau du genou

Factors associated with deep infection in TKA

- The patient:95% of the cases.
- Obesity (BMI > 35)
- Age(≥75 years!), a preop stay over 4 days,other nosocomial infection.

A de Boer SHEA June 1999 402-407

- Corticotherapy and Immunosuppressive treatment(anti-TNFalpha:Infliximab-Remicade,...)
- Diabete
- ASA > 3
- Bilateral procedure ,revision and operative time
- Depression
- Alcohol

Guidelines for an infected TKA:classification.

- Type 1: a positive intra operative culture at revision without previous evidence of infection.
- Type 2: **early** post operative infection (0-2 months)
- Type 3: **hematogenous** infection (?)
- Type 4: **late chronic** infection (longer than 2 months)
Tsukayama and al Am JBJS, 1996-2003
- *Zimmerli and al*
Late chronic infection:delayed (2-24 months)
late (2years...)

Early infection(0-2 months)



Ascopic lavage vs
Open Debridment??

Early infection(0-2 months)



- Ascopic Debridment
Is enable to control infection:reserved for patient too sick or for patient refusing operation....

Arthroscopic Debridment=Poor Prognostic

- The inability to address the slime layers on the under site of PE
- The difficulty in debriding the back of the knee

Only useful in identifying germ(joint biopsies) as a suppressive therapy in critically ill patient or patient refusing operation.

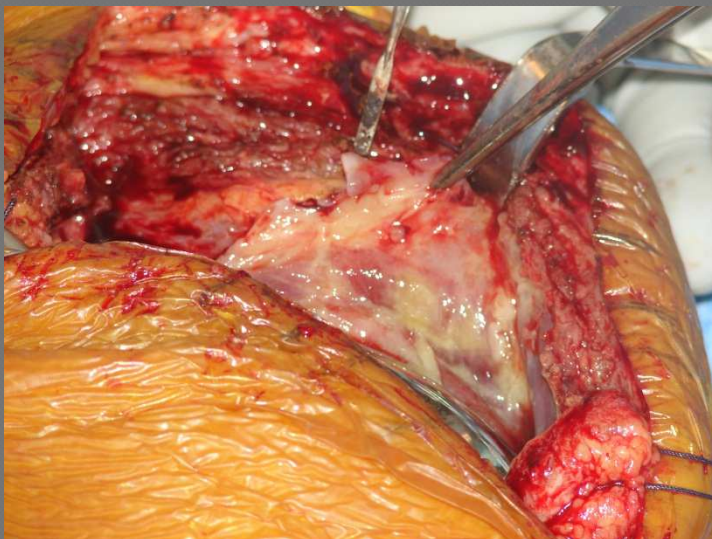
Arthroscopic Debridment : No curative treatment

Early infection: Open Debridement



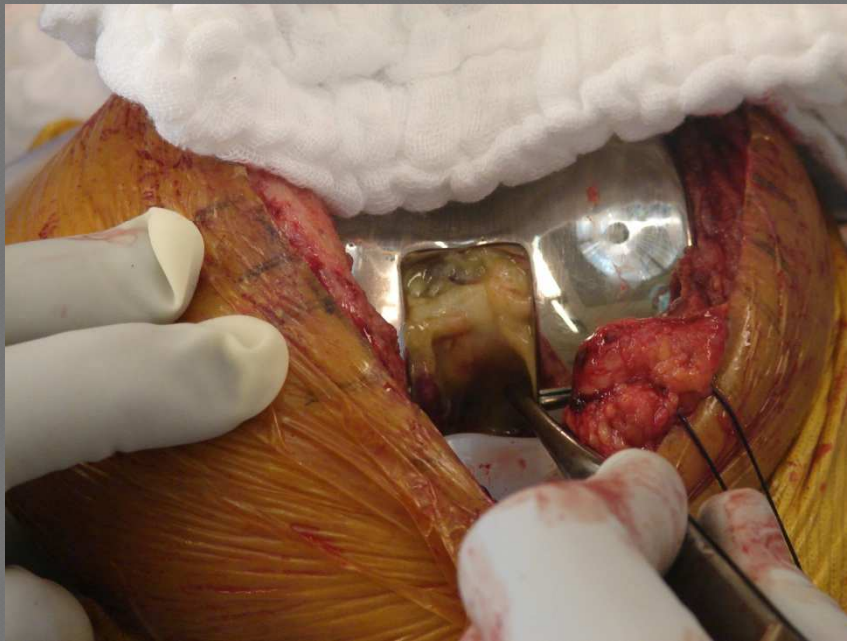
- Arthrotomy(if soft tissue damaged:excision)
Hanssen: Arthroplasty 2002

« *Debridement attempts should be open and not Arthroscopic... »*



- Meticulous Synovectomy
(reduction infected material within the joint to a minimum)

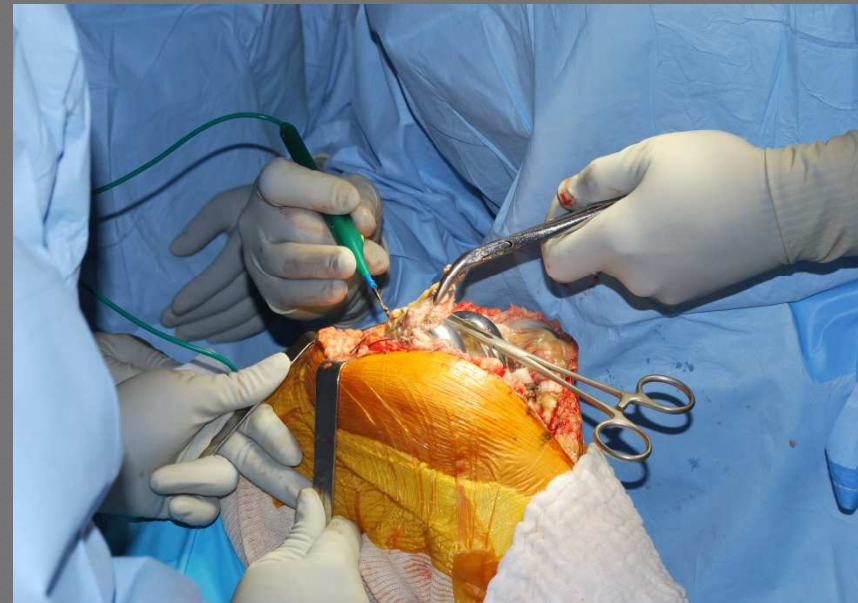
Early infection:Open Debridment



- Change the modular part (if it's possible) →allows posterior debridment.
- Physiologic serum irrigation(9 l)+Rifocine
- Multiple samples
- For closure:patient redraped
- New set of instrument and op. team regloved

Early infection:open debridment

- When?
Earlier is better!!!
- The key:before the Biofilm formation
- The key:no a-b preop and multiples samples



Early Infection(0-2months)

An early infection (0-2months after surgery),infection with less than 3 weeks duration,with stable implant and good soft tissue situation can be treated with debridement and retention with the problem of « the difficult-to-treat microorganisms »
Zimmerli W(Liestal,Sw)