

Two Stage
Revision Hip Arthroplasty
for a Case of
Infected Total Hip Replacement

Dr Mukund Pai
Resident
Department of Orthopaedics

Case

60 year old male came with complaints of right hip pain since 2 years

Patient is an operated case of right hip osteoarthritis.

Patient underwent right hip total arthroplasty 12 years ago.

No history of fever

No history of weight loss

No history of discharging sinus

On examination of right hip

No swelling

Tenderness over Inguinal region Present

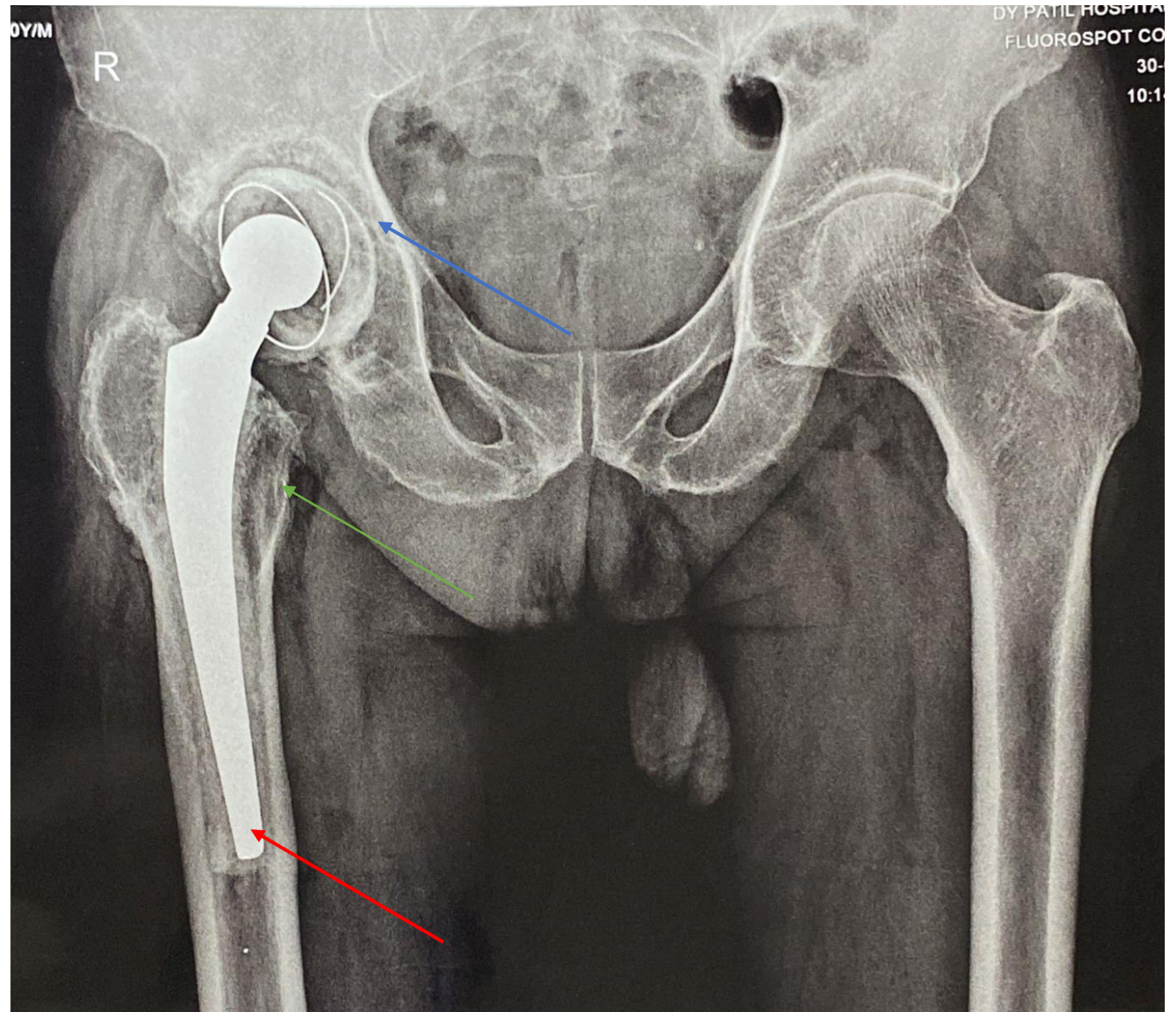
Range of motion of right hip - full, painful at extremes of flexion and extension

Shortening of right lower limb by 2cm

No distal Neurovascular compromise

X-ray Findings

- Osteolysis in acetabulum
- Osteolysis in femur
- Varus shift in femur stem with proximal migration of femur.

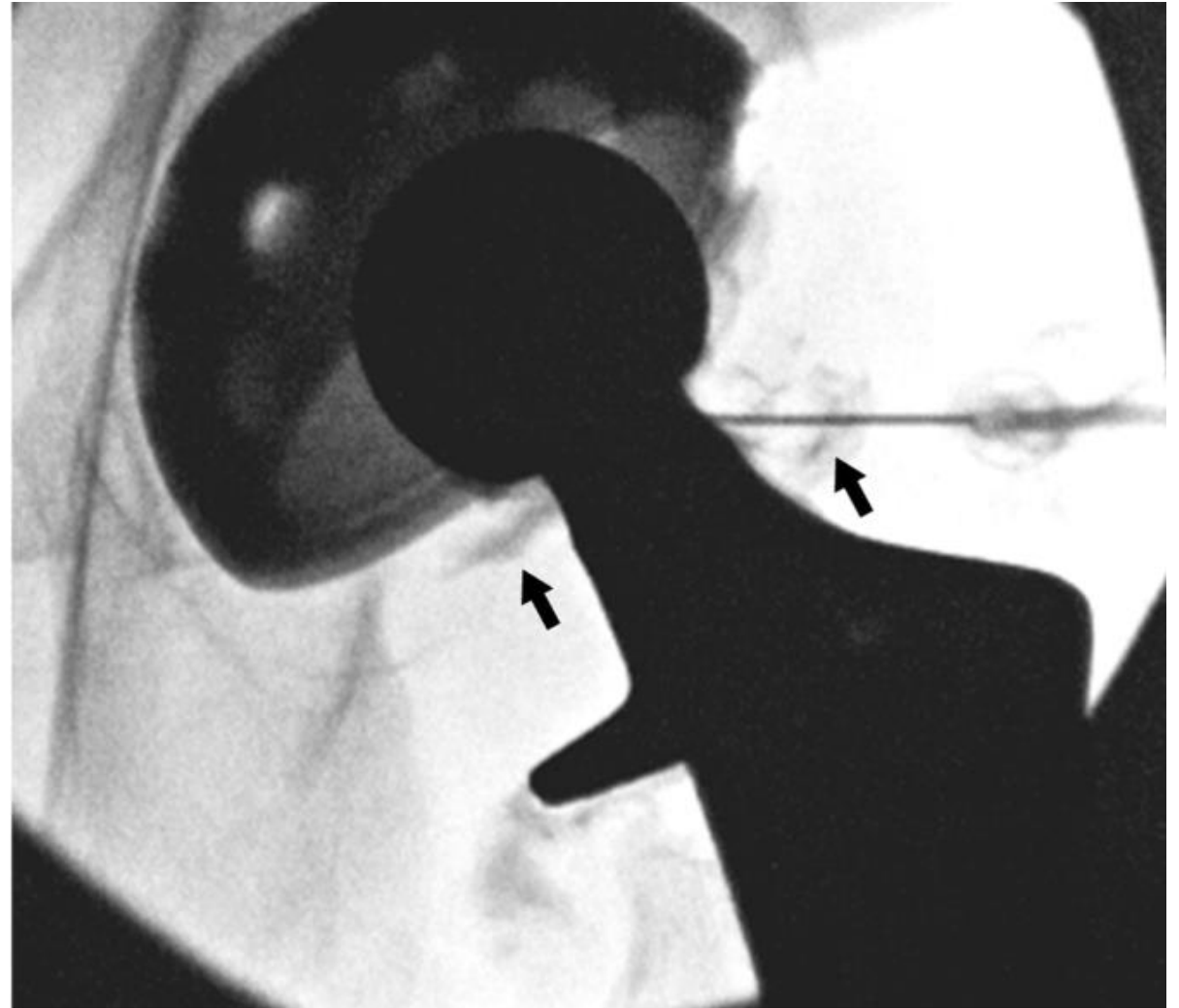


Aspiration was attempted of the right hip - dry tap.

TLC 10,600 cells/ cubic millimeter

ESR - 30 mm/h

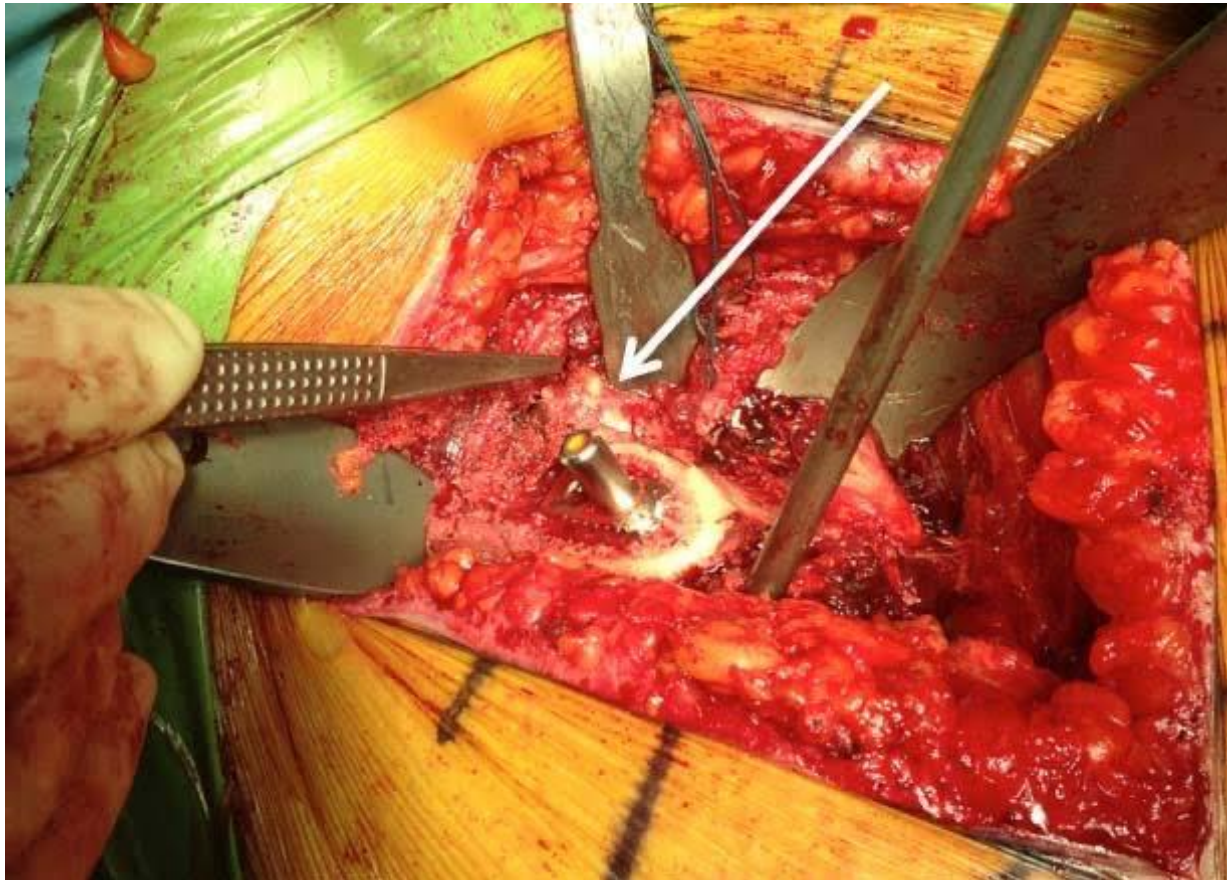
CRP - 10mg/L.



Implant removal was done for the patient

Antibiotic impregnated cement spacer was placed
(PMMA with 4g Vancomycin)

Soft tissue and marrow samples were sent for gram
and ZN staining, aerobic and anaerobic culture and
CBNAAT



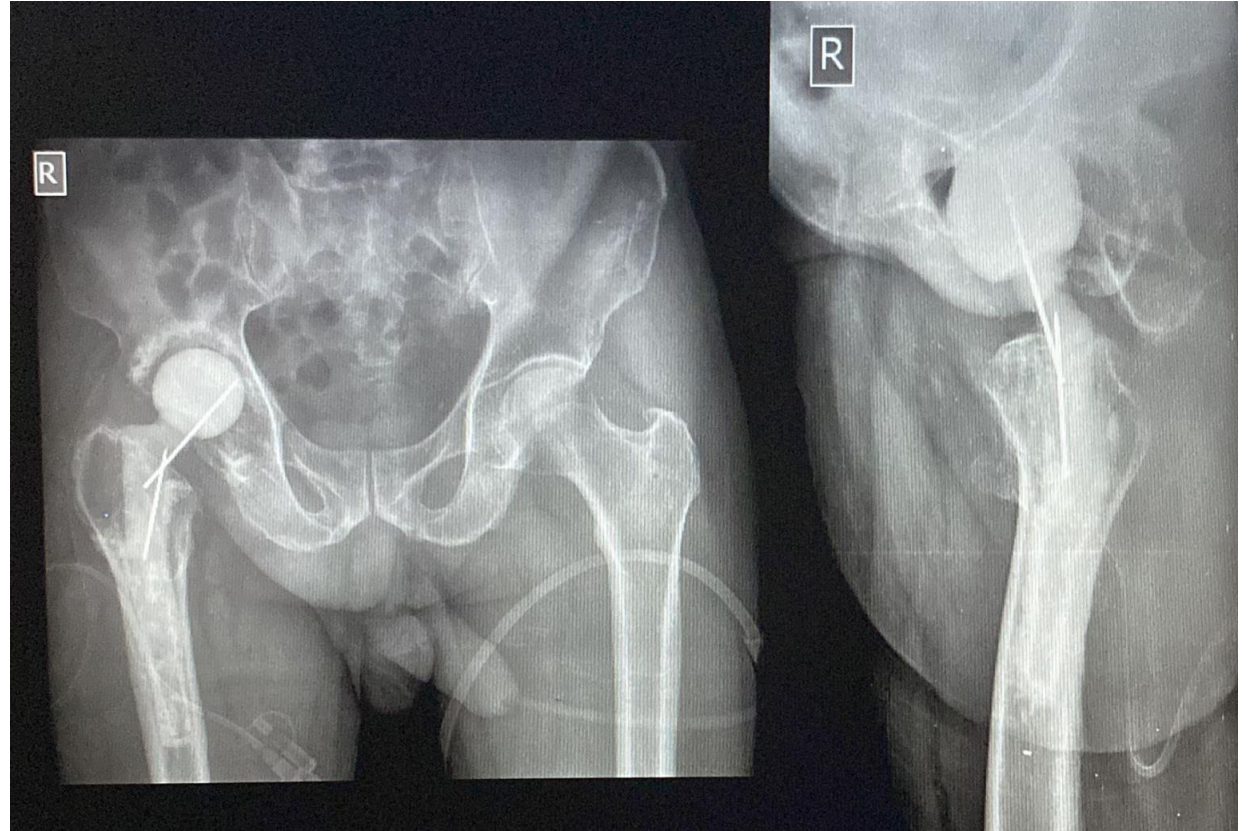
Preparation of Cement Spacer



Final Prepared Cement
spacer and Mold



Xray after Placing Cement Spacer



Gram and ZN staining - no organism

Cultures - no growth

CBNAAT - negative

Patient was then allowed to partially weight bear walk for 6 weeks.

CRP ,ESR and TLC was reevaluated at the end of 6 weeks and found to be within normal limits

- Patient underwent spacer removal and total hip hybrid arthroplasty was done 6 weeks later.



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Cup – Uncemented Metal size 54mm with 2 screws

Poly Liner – Highly crosslinked poly vitamin enriched 54mm size

Femur Stem – Cemented Cobalt chrome of medium size of ceramic head of size 32mm with regular offset



- Patient had uneventful post operative period.
- Patient started full weight bearing walking on 3rd day.
- Suture out was done on POD 15.
- Patient had full range of movement and has no signs of infection on subsequent follow ups.

Range of Motion of right hip after one month



Walking
video after 3
months



Take Home Message

- Current reported rate of infection following primary total hip arthroplasty is 0.50 – 2.0%.
- Two staged revision hip arthroplasty is preferred over single stage THA as infection free rate is 89.1% as compared to 66.7% in single stage revision.
- Antibiotic articulating spacer helps to maintain proper limb length and soft tissue tension in between 2 stages.
- The use of antibiotic impregnated cement in the second stage of the 2 stage Total Hip Arthroplasty has an infection free rate of 93%.