

Nonunion of femoral neck fracture

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Aim

- **define nonunion of femoral neck fracture**
- **fixation failure**
- **can choose the best treatment for it**

Definition

- **after 6 months**
- **fixation failure**
- **change the position of head**

work up

- **infection R/O**
- **ESR/CRP**
- **MRI / MARS**

Pay attention to:

- **age**
- **demand**
- **cartilage**
- **bone stock**
- **size of bone for fixation**
- **viability of head**
- **remaining neck portion**

Options:

- **Hip Fusion (Arthrodesis)**
- **re osteosynthesis with or without graft**
- **Valgus osteotomy with or without graft**
- **total hip arthroplasty**

Reosteosynthesis +/- graft

- early failure (less than 3 months)
- viable head
- good cartilage
- good bone stock
- sufficient size
- good neck

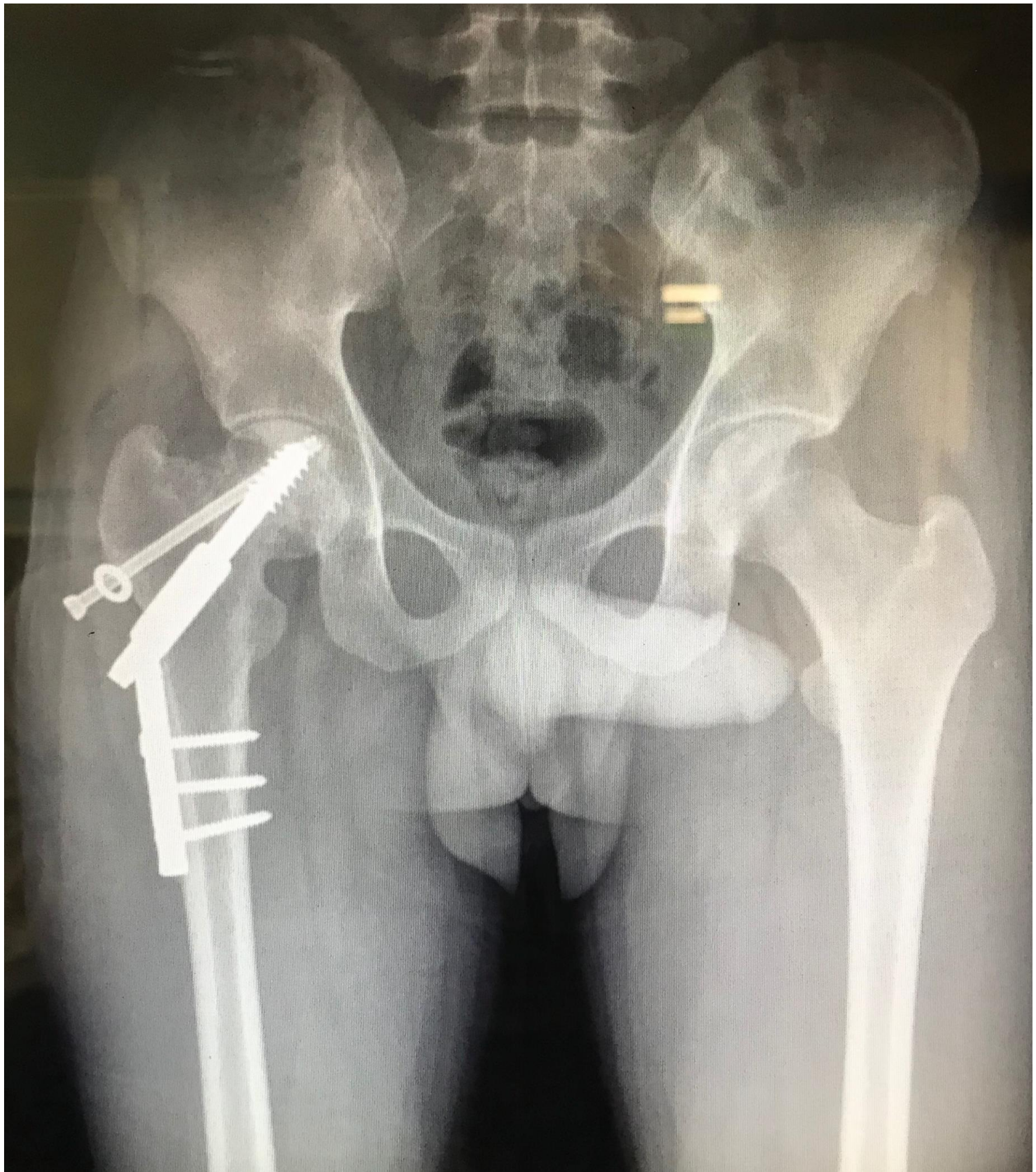


Valgus osteotomy +/- graft

- More than 3 months from fracture
- viable head
- good cartilage
- good bone stock
- sufficient size
- good neck

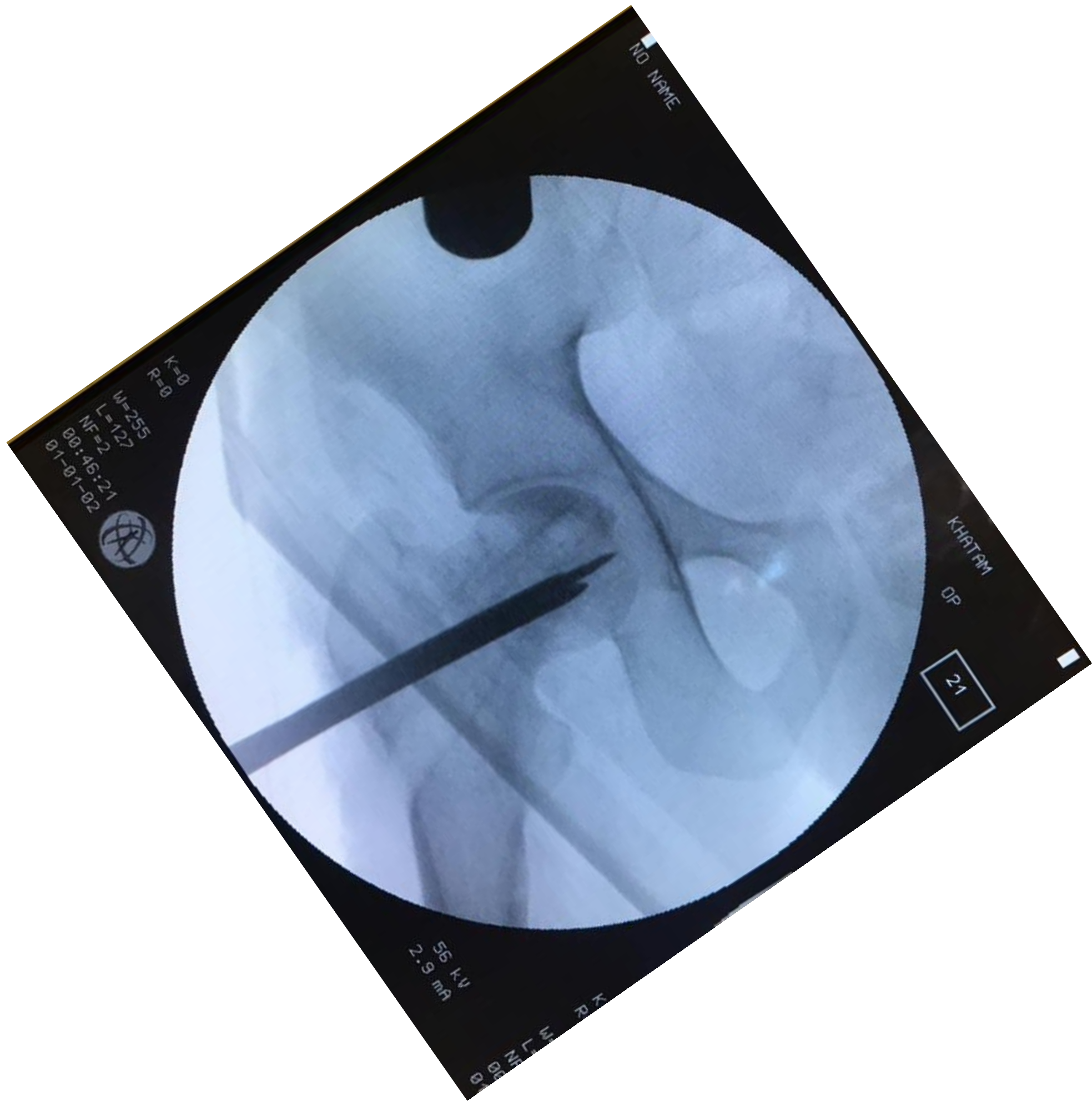


- **male**
- **24y**
- **6 months from index surgery**



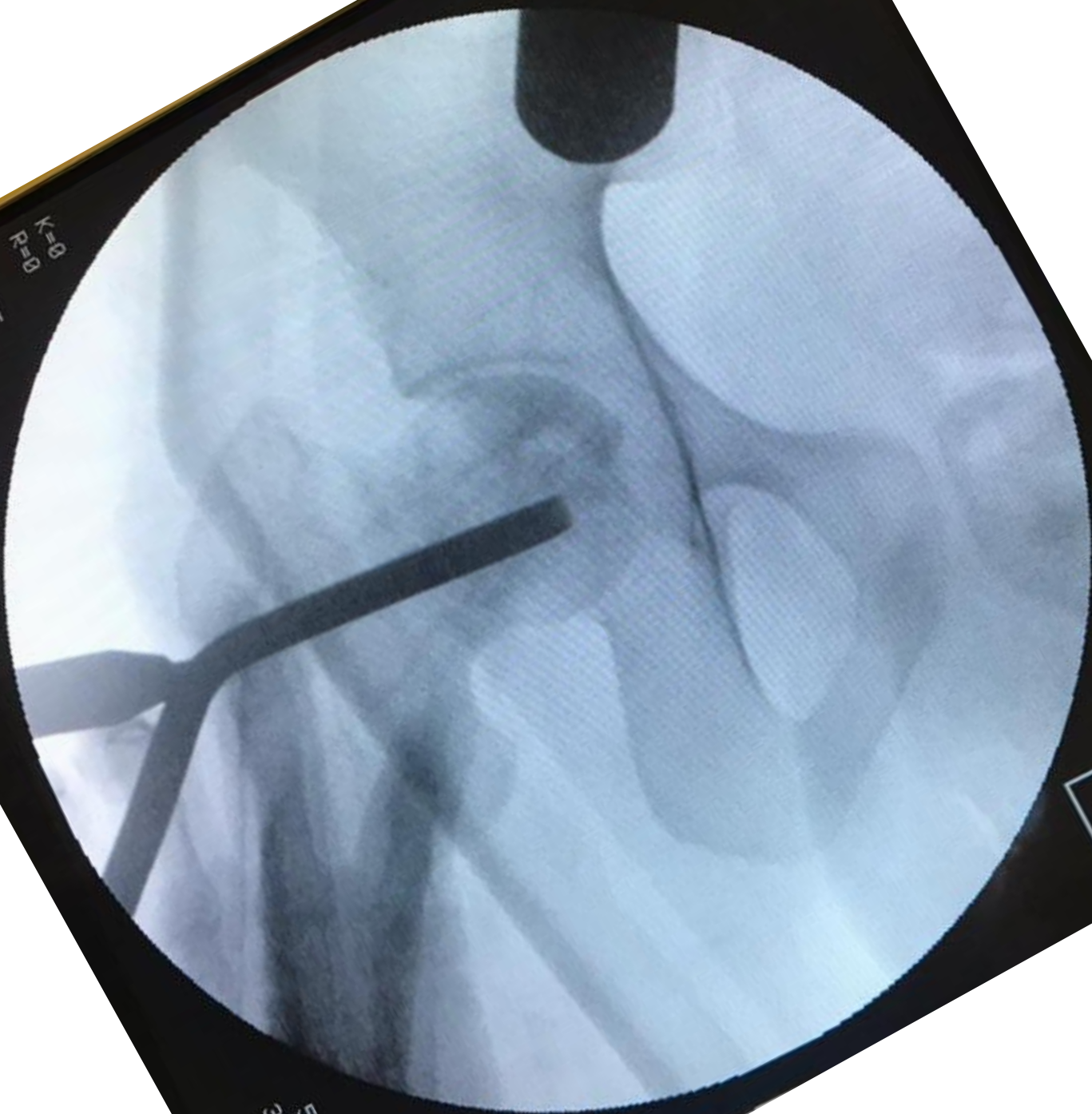






NO NAME

K=0
R=0
W=2555
L=127
NF=2
00:58:00
01-01-02



KHATAM
OP

31

57 kV
3.0 mA

00:58:00
01-01-02

NO NAME

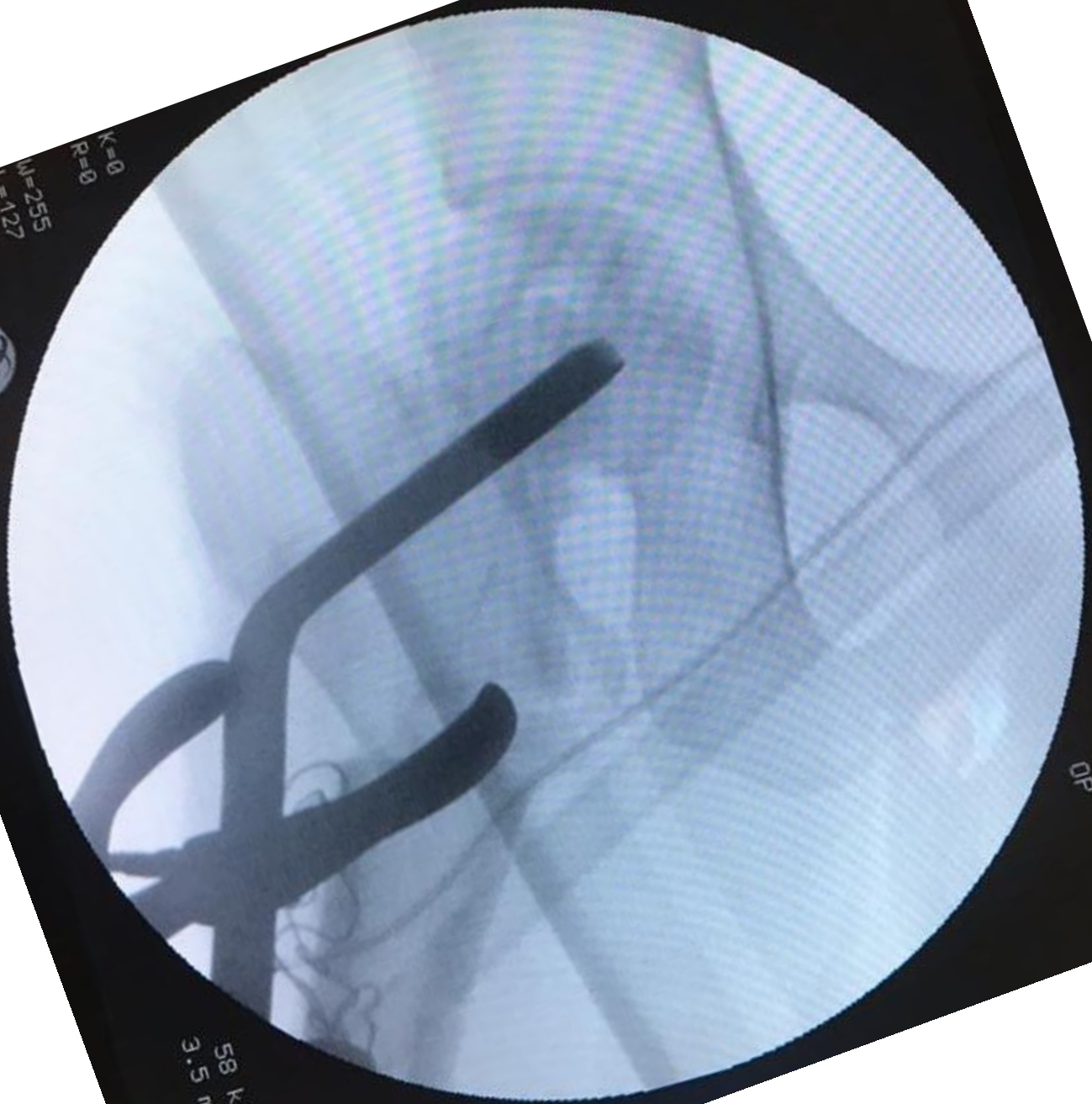
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L=127
NF=2
01:24:48
01-01-02



КНННТТМ
DP

58 kV
3.5 mA

K R
W=
L=
NF
01
01



NAME

5.7
5:56
4-02



KHATAM
OP

56 kV
2.9 mA

0.1
0.1
NF
L
M
K



6 months later





other case





ic MRI

MR scans with multiplanar images in different pulse sequences;

Post operative changes in right hip and femoral neck are seen.

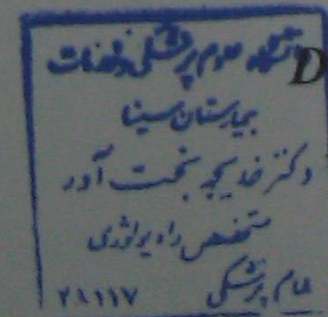
Old non union fracture in the sub capital region of femoral neck seen with extension to the femoral head.

Joint effusion and marked soft tissue edema in surrounding periarticular tissue are seen which may be related to post operative changes.

There is no evidence of AVN in femoral head.

Abnormal signal in intrachontric region and femoral neck are noted.

The left hip appears normal. /61

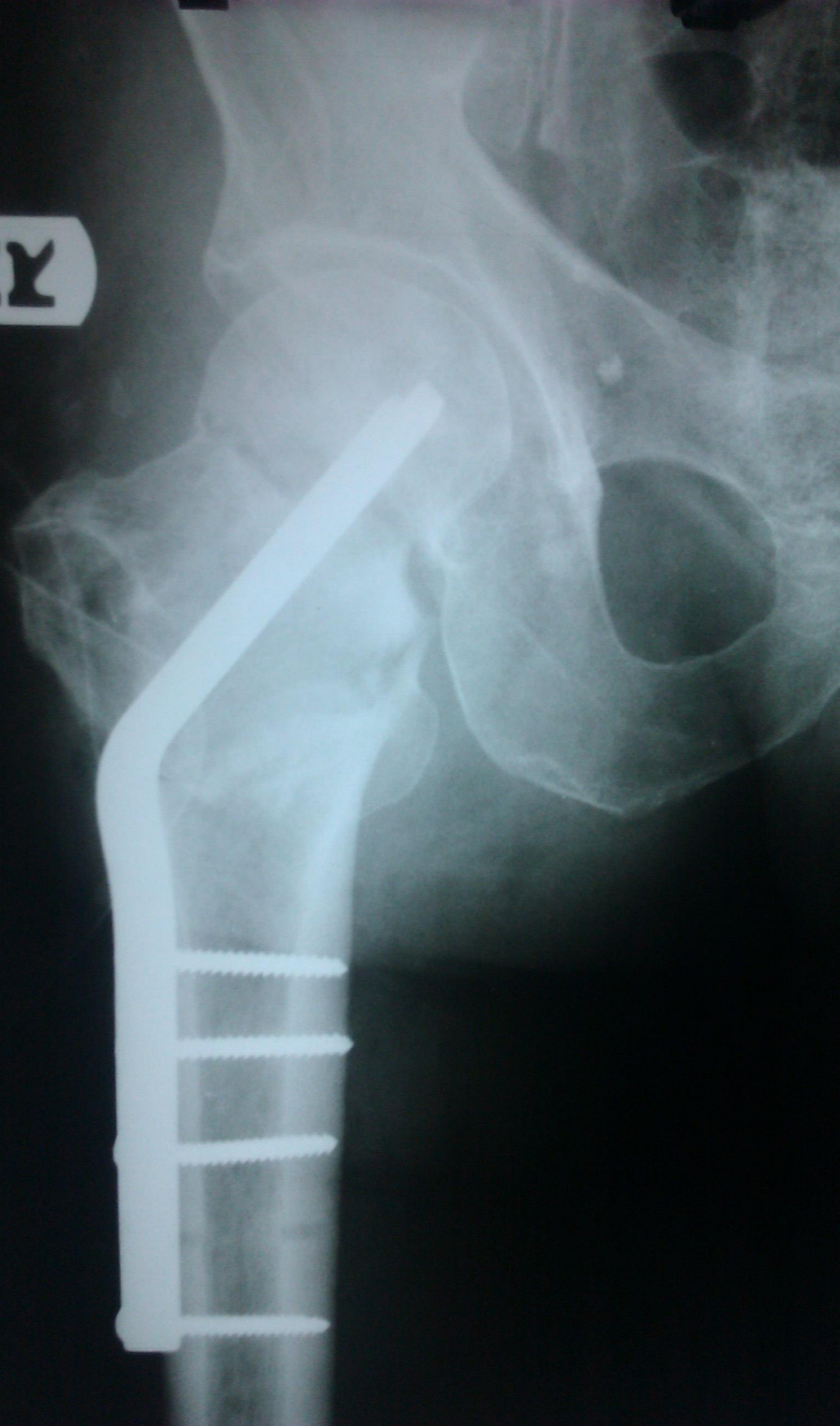


Dr. Bakhtavar

Radiologist

90/11/15

29 IX



6 months later



Total hip arthroplasty

- no functional cartilage (decreased joint space)
- insufficient bone size
- insufficient bone stock (osteoporosis)
- insufficient neck
- active and functional



R





Summary

- **Look at cartilage, bone stock size, neck, viability**
- **if all of them are OK>>>>>valgus osteotomy**
- **if one of them is not present >>>>>>THA**

Thank you