



THE ROLE OF PREOPERATIVE EMBOLIZATION OF BONE TUMORS IN THE PELVIC – A CASE REPORT

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Case presentation

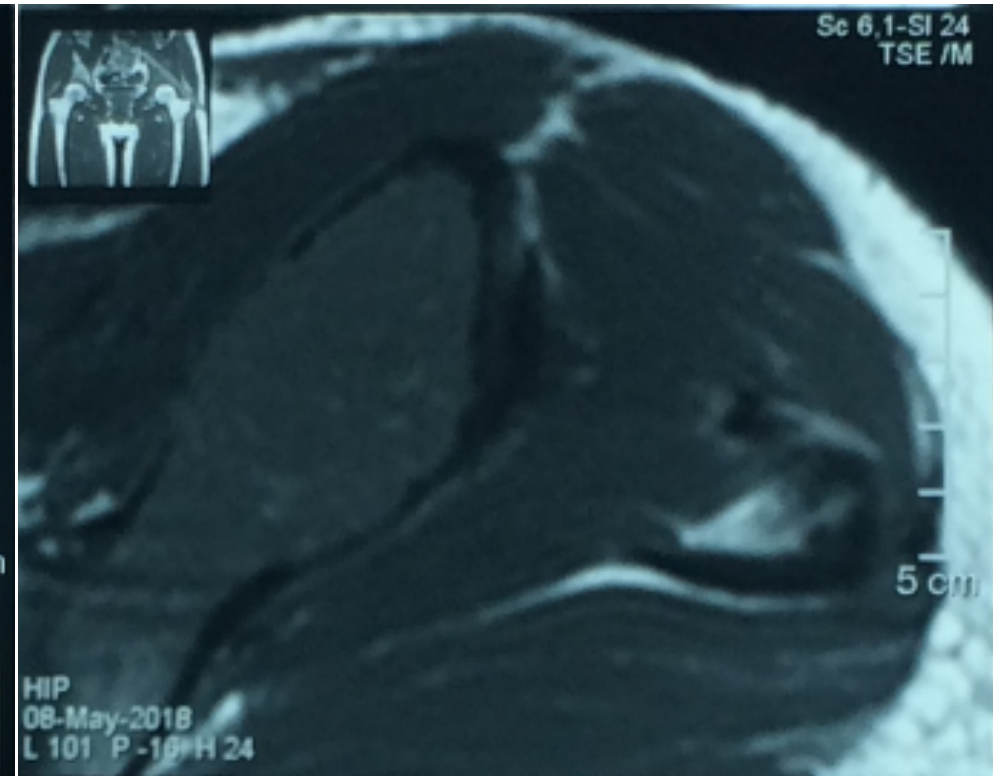
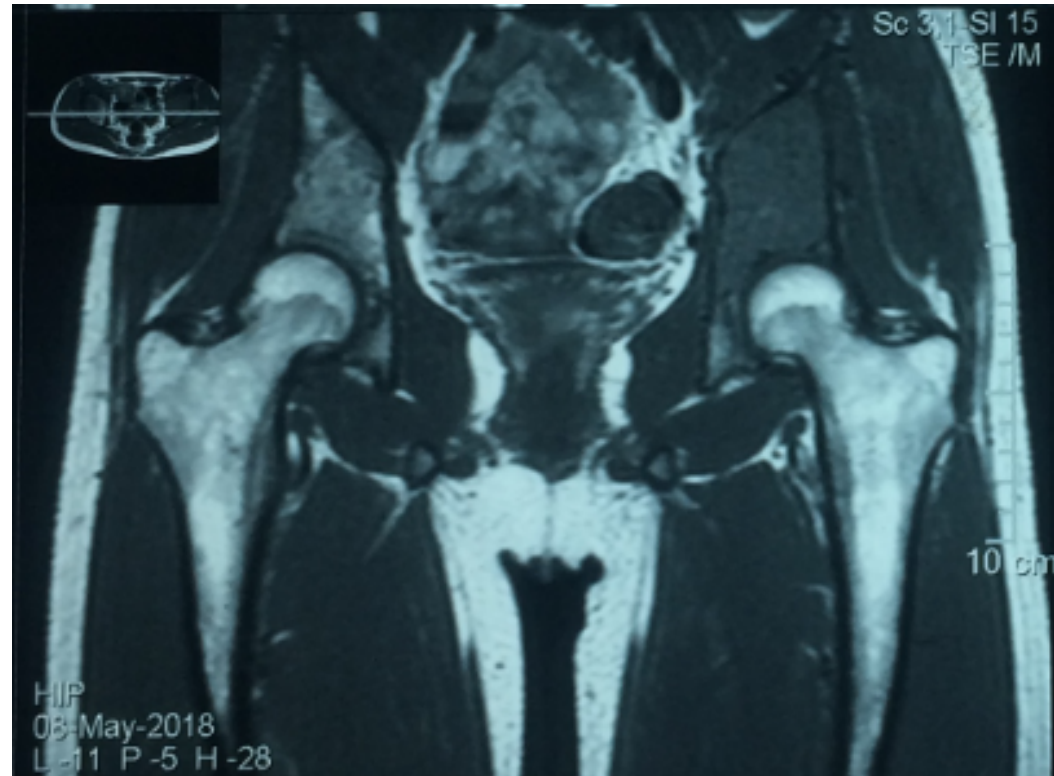
- 18 yo man
- Chief complaint: Left hip pain
- History of present illness
 - The patient had suffered from left hip pain 4 months ago, which had not improved with medications
- Physical examination
 - Tenderness at the Scarpa's triangle
 - AROM and PROM is normal



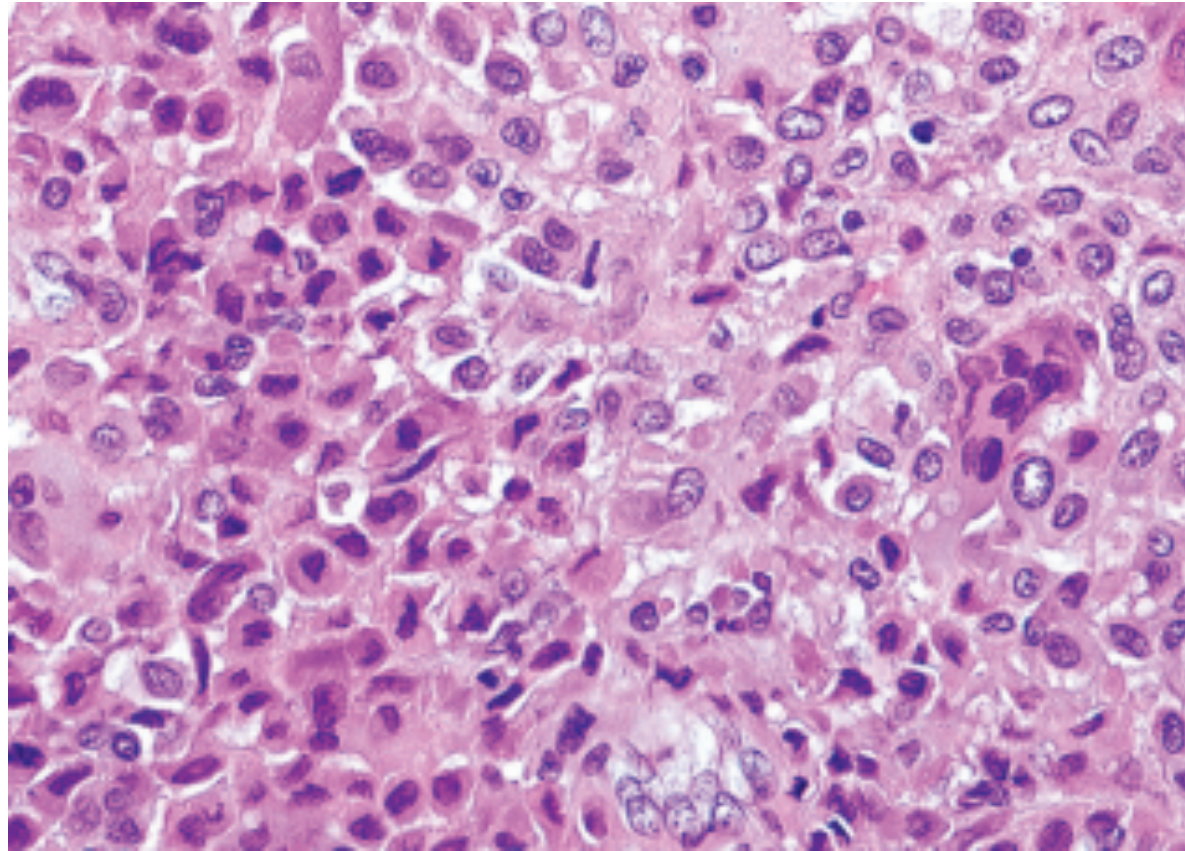
Imaging



Imaging



Pathology



Pathological diagnosis: Chondroblastoma



Diagnosis

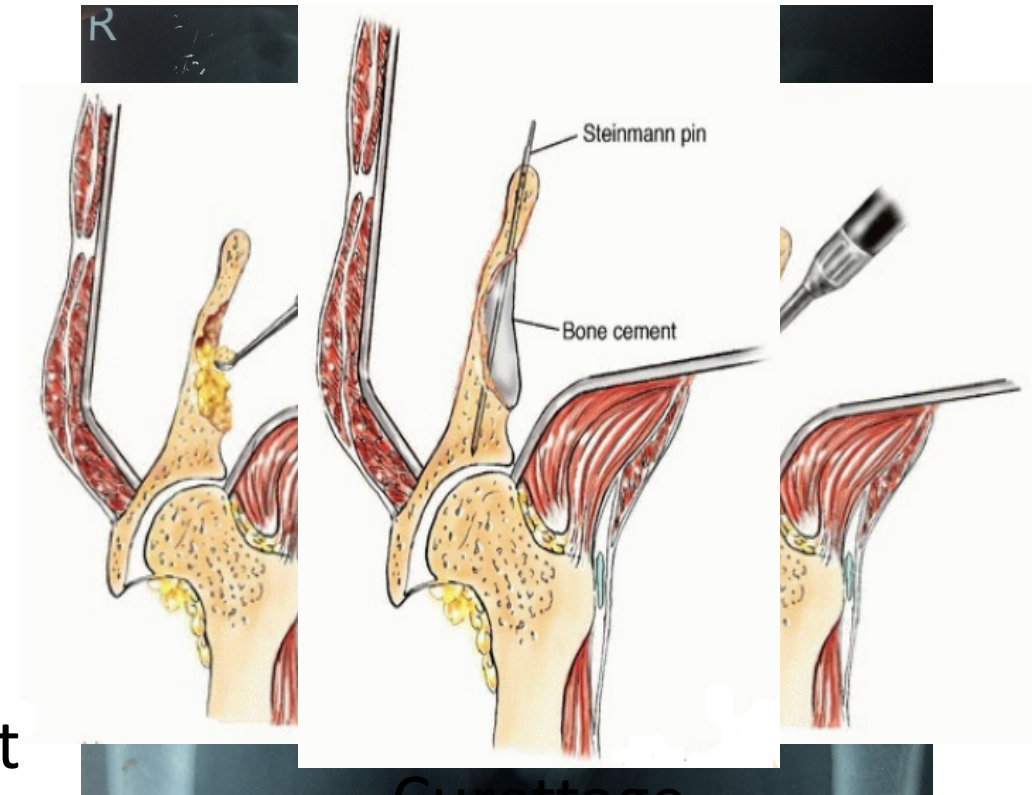
Chondroblastoma of the Left iliac and acetabular roof

Treatment

1. ~~Curettage~~ Preoperative embolization

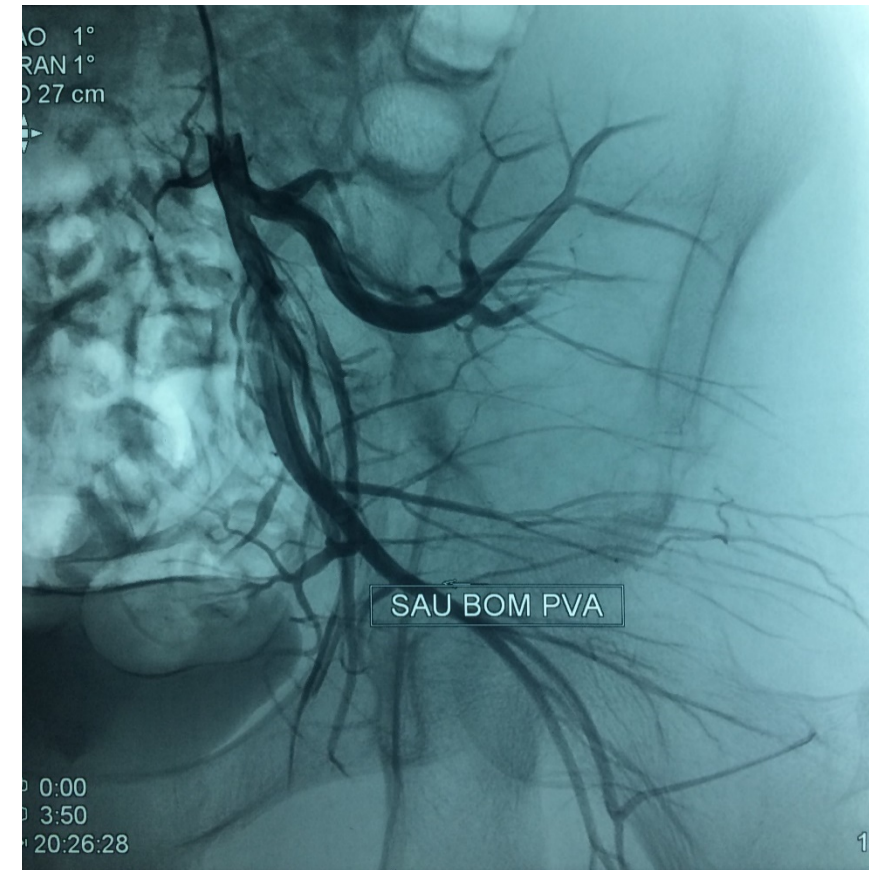
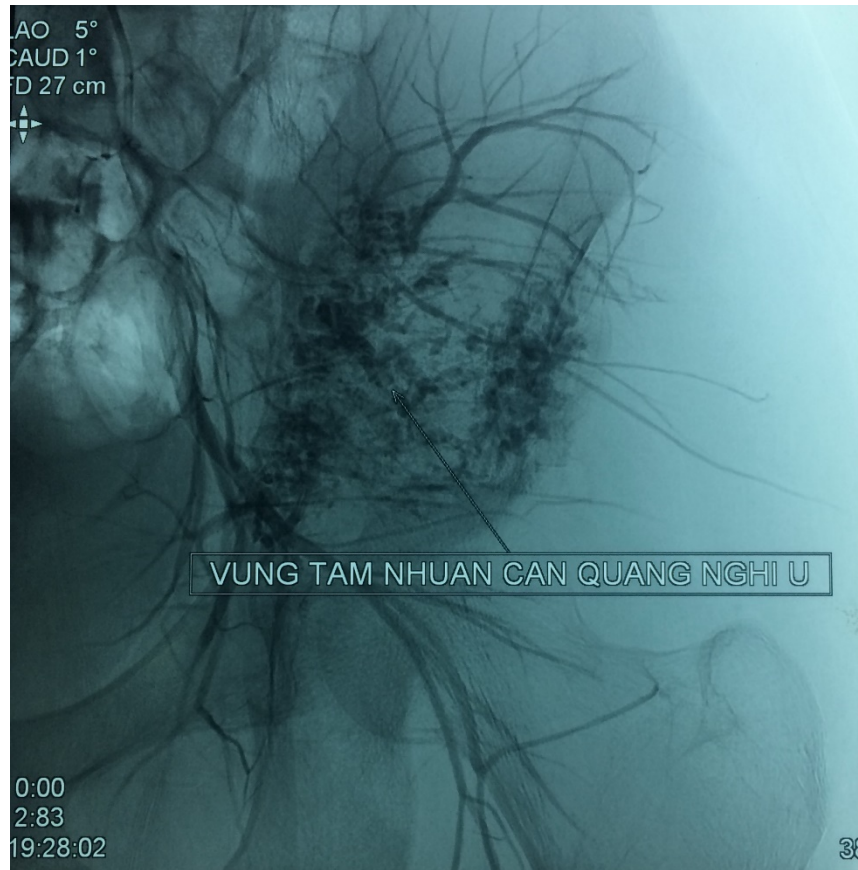
2. ~~Reconstruct~~ Curettage with bone graft and cement

3. Reconstruct with bone graft and cement

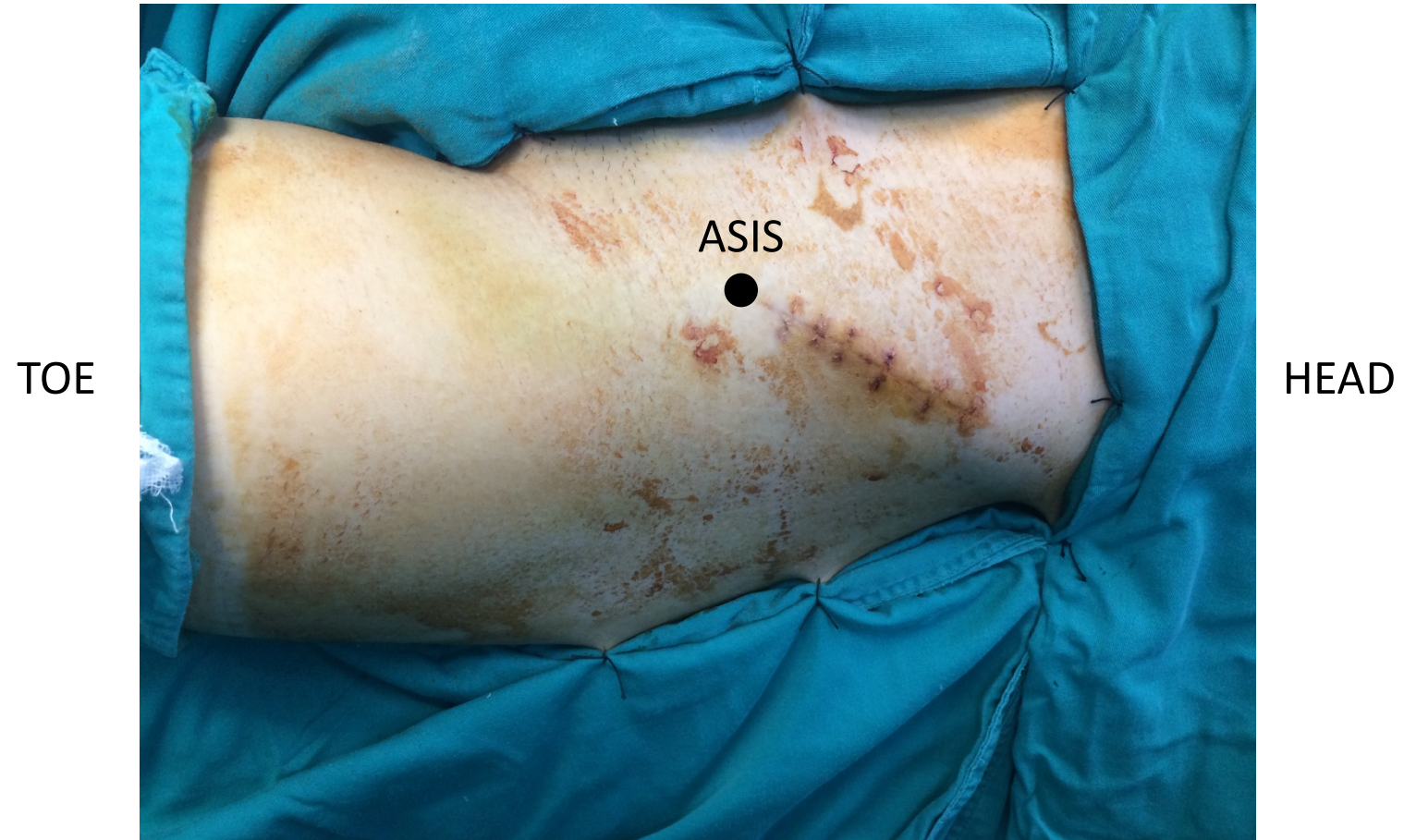


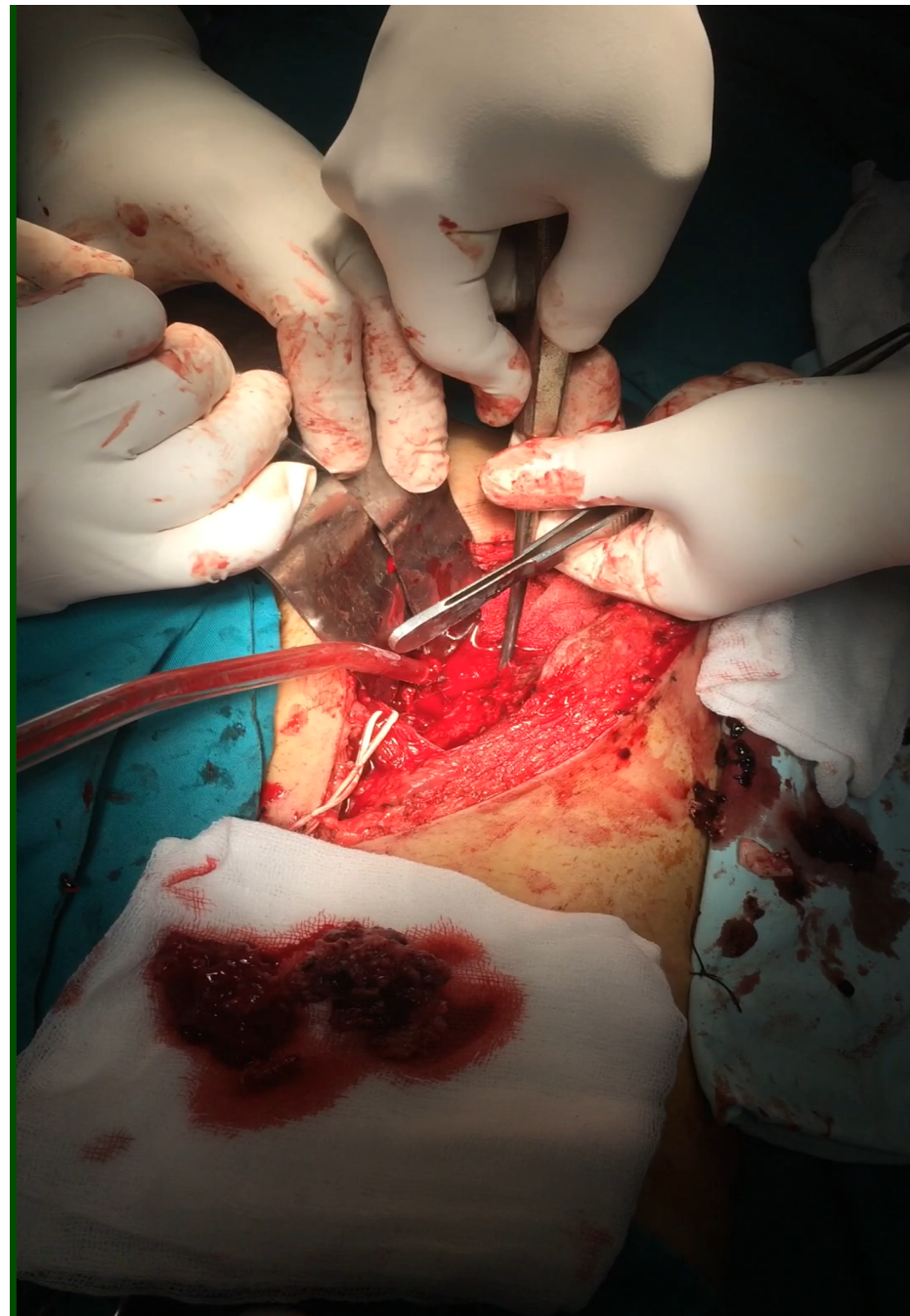
Curettage
Reconstruction

Preoperative Embolization



Intraoperative images





Intraoperative images

Lateral cutaneous
nerve

TOE

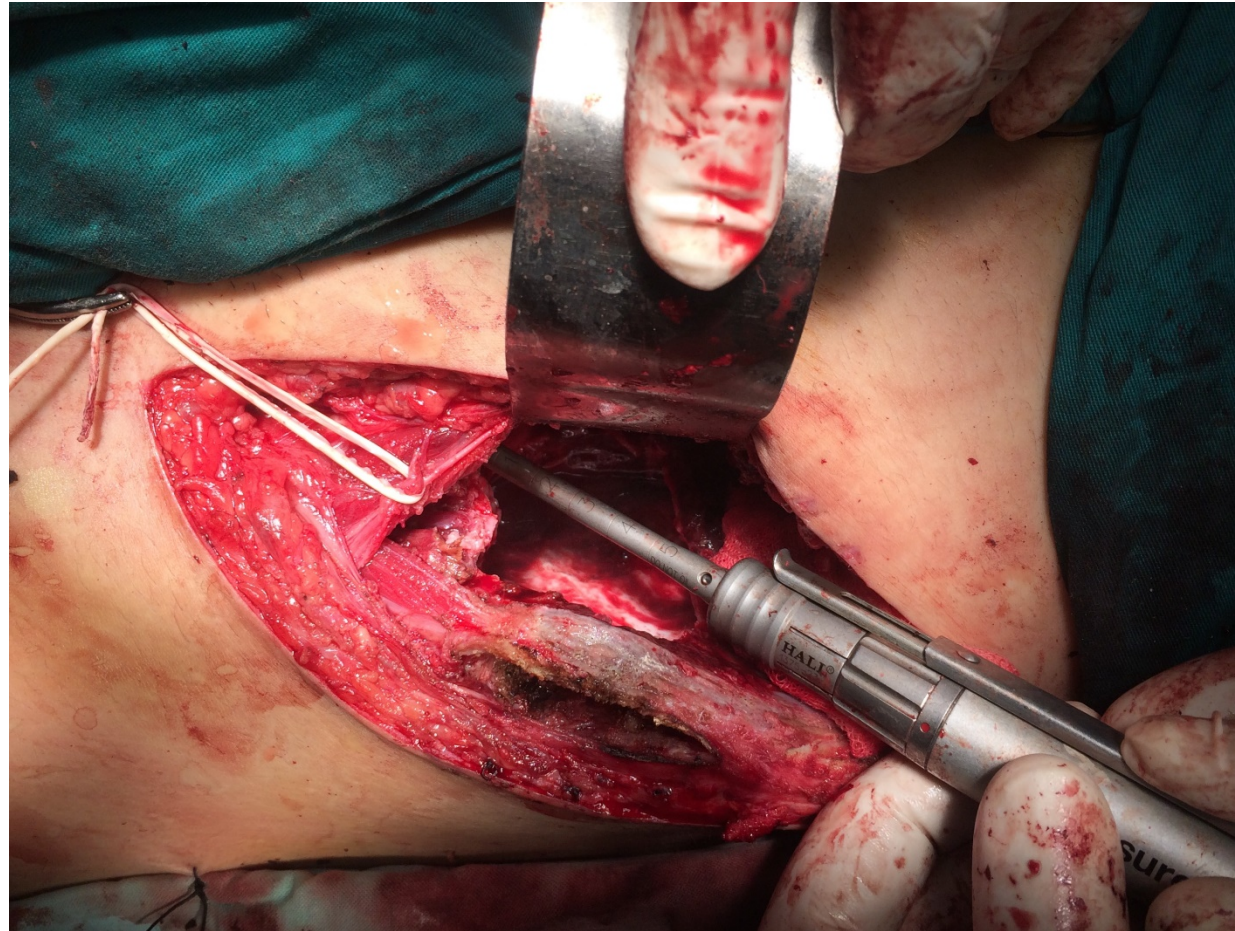


HEAD



Intraoperative images

TOE

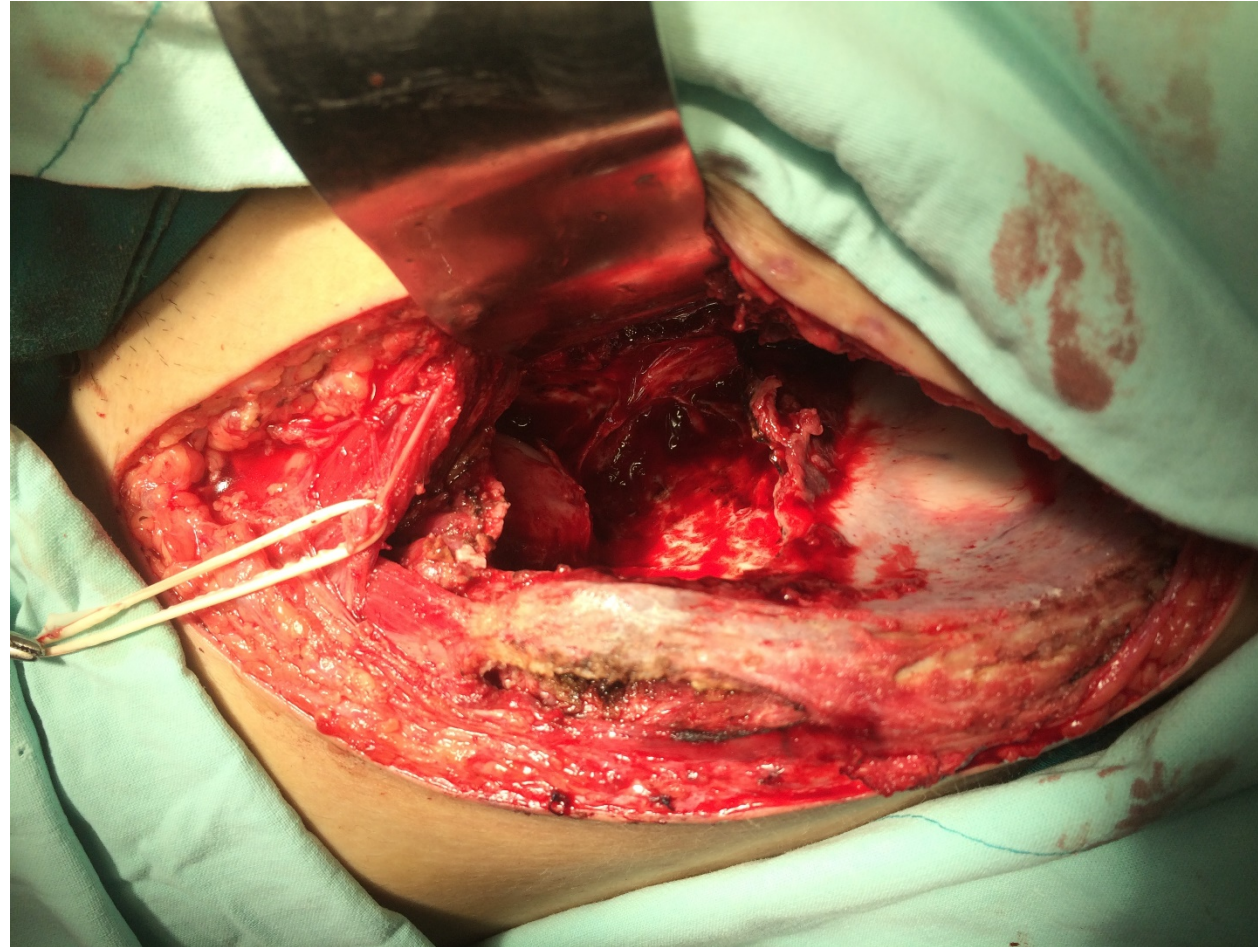


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Intraoperative images

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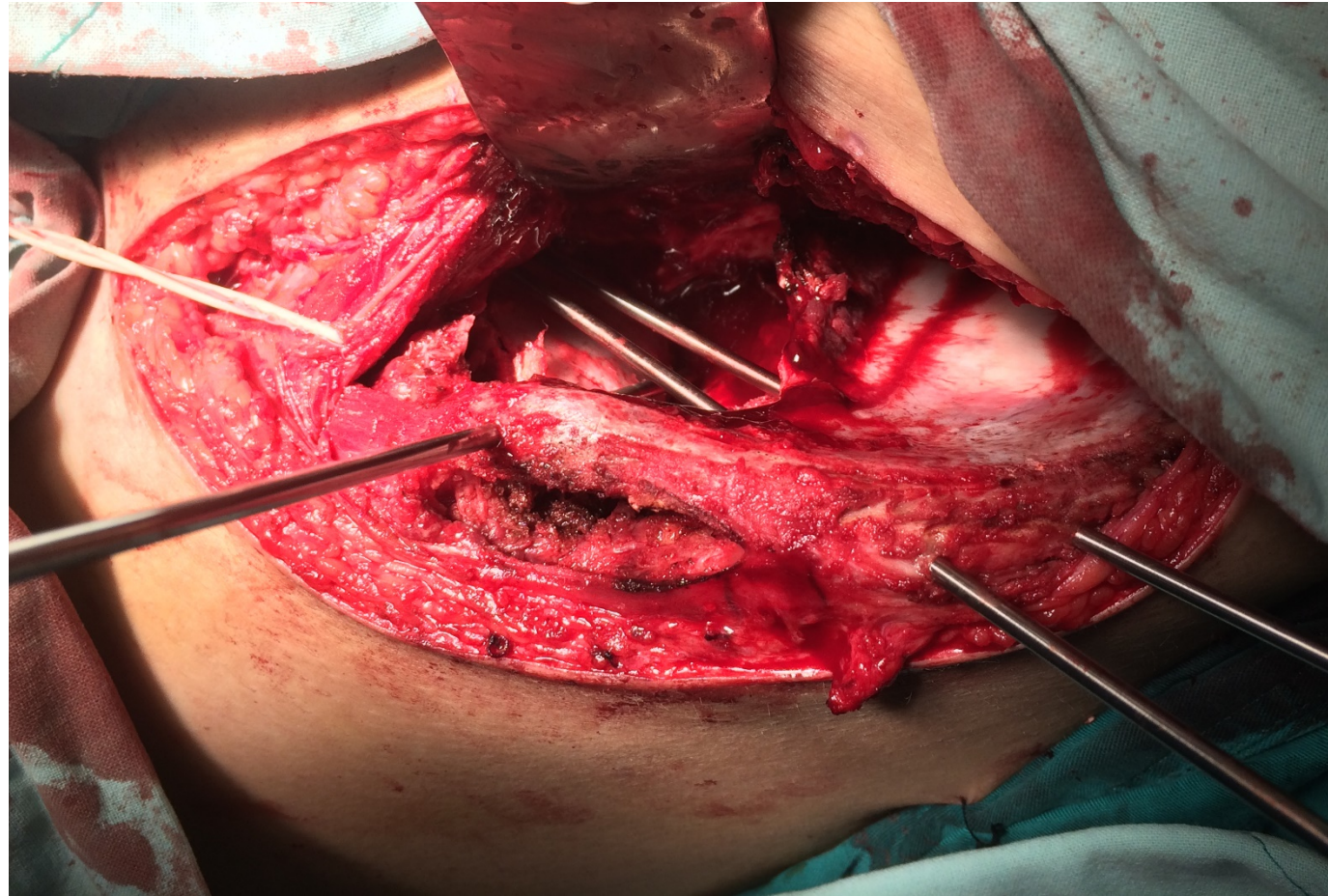


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Intraoperative images

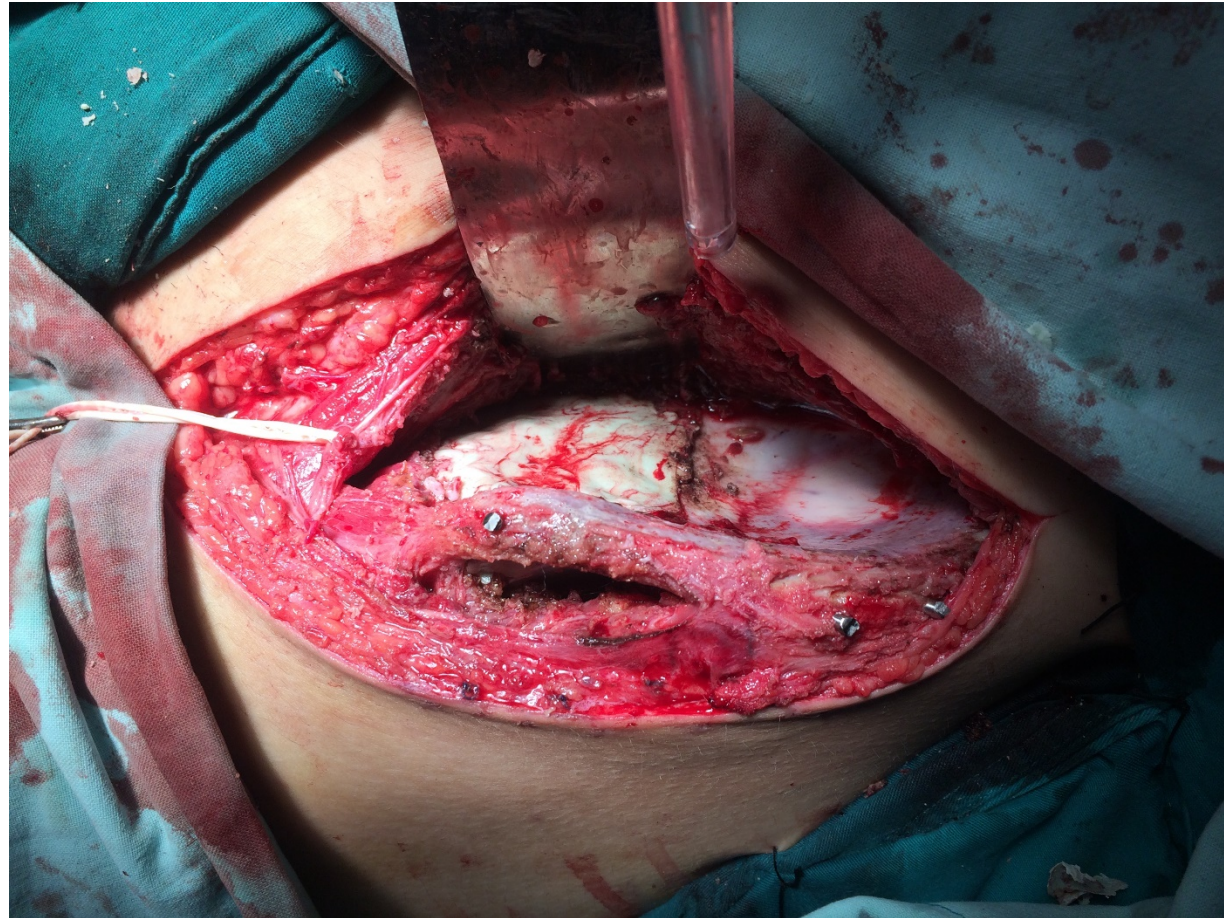
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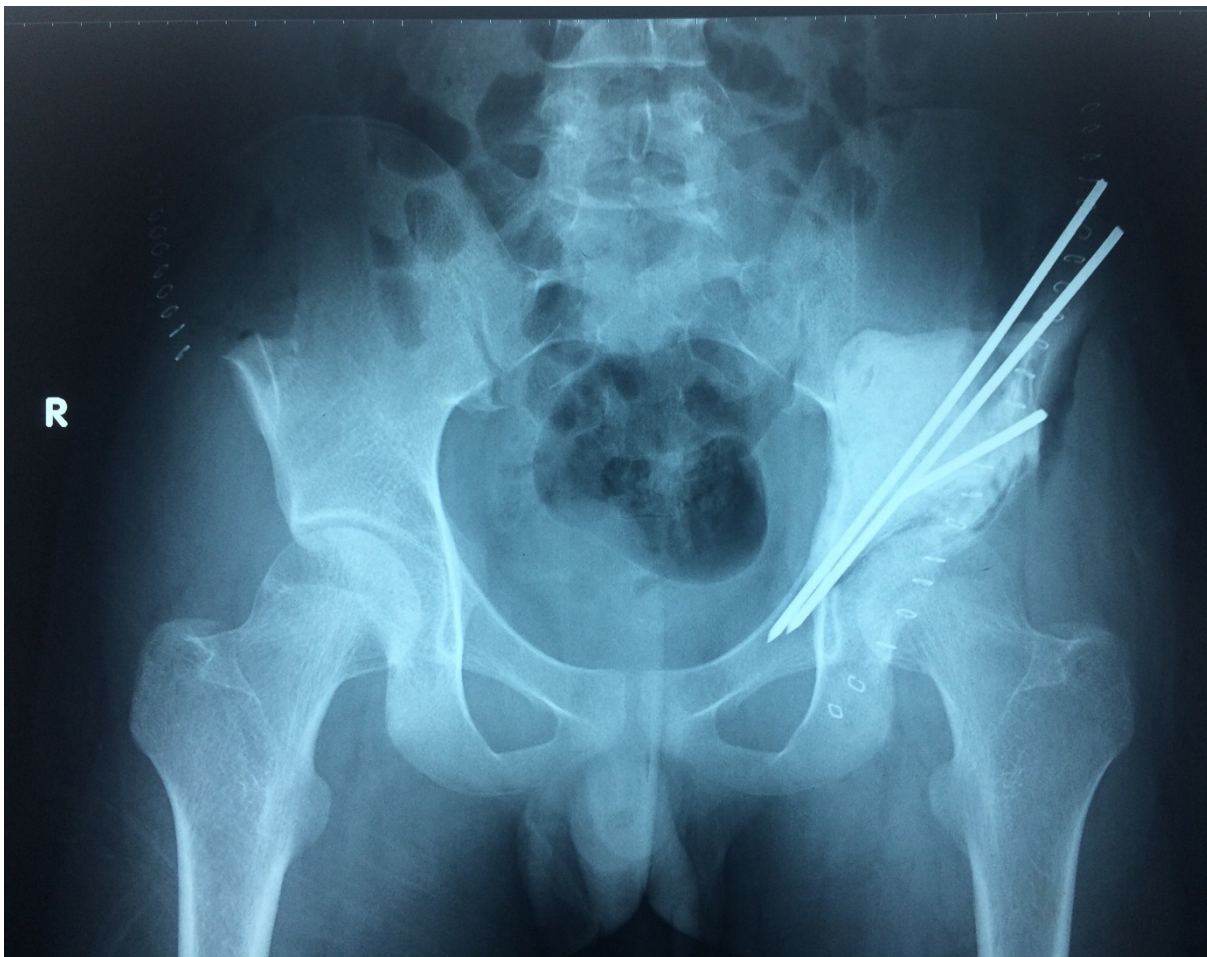
Intraoperative images



HEAD



Postoperative imaging



Operating time: 2.5 hours

Blood loss: 500ml

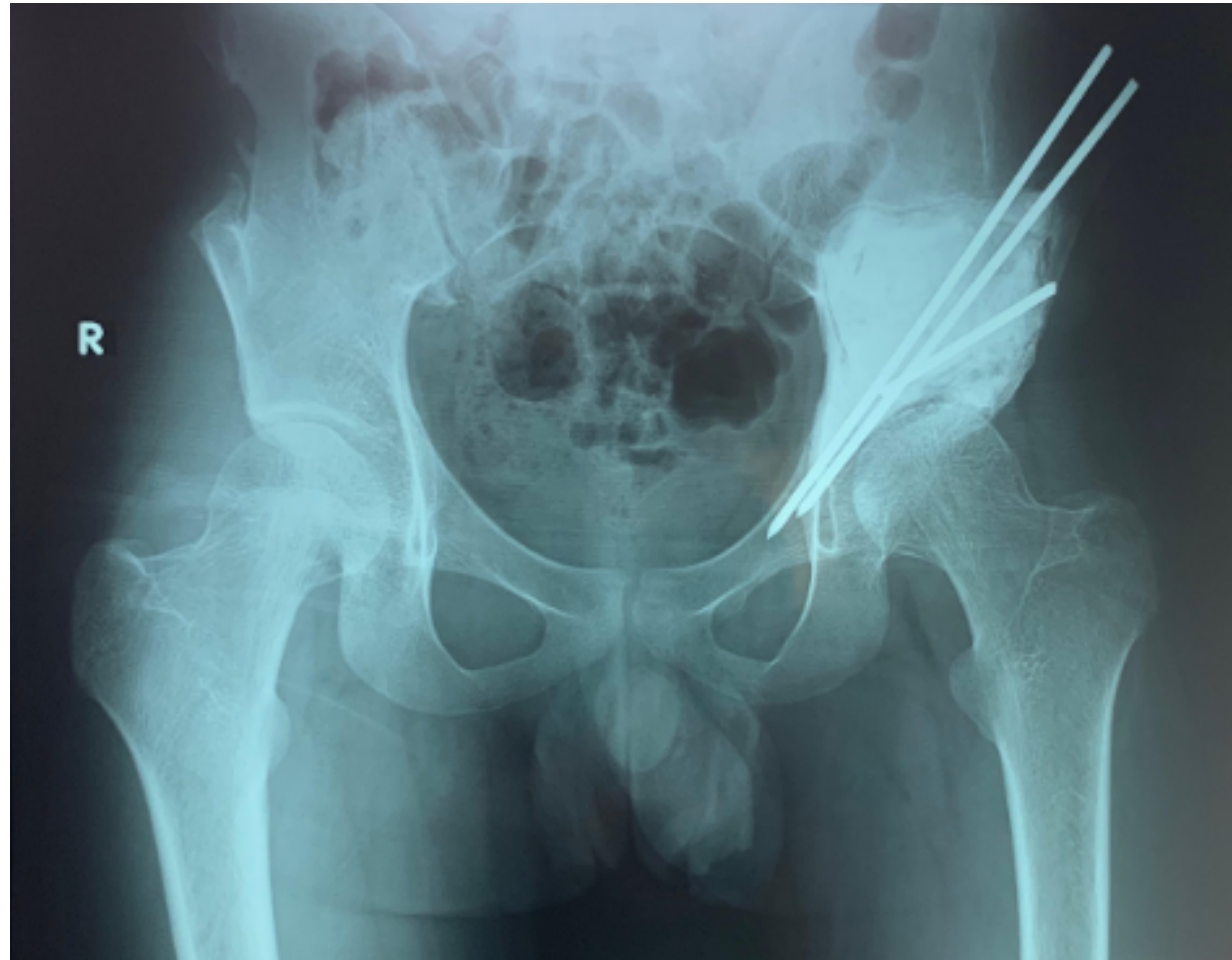
Blood transfusions:

Red blood cell: 2 units

Plasma: 1 unit



10 months FU



10 months FU



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Chia sẻ nỗi đau - Tận tâm phục vụ

10 months FU

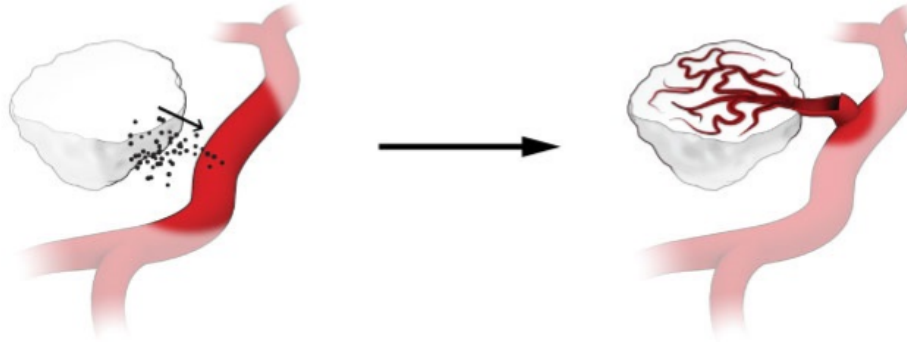


Discussion

Angiogenesis

1 Tumor cells secrete factors to **stimulate vessel growth**.

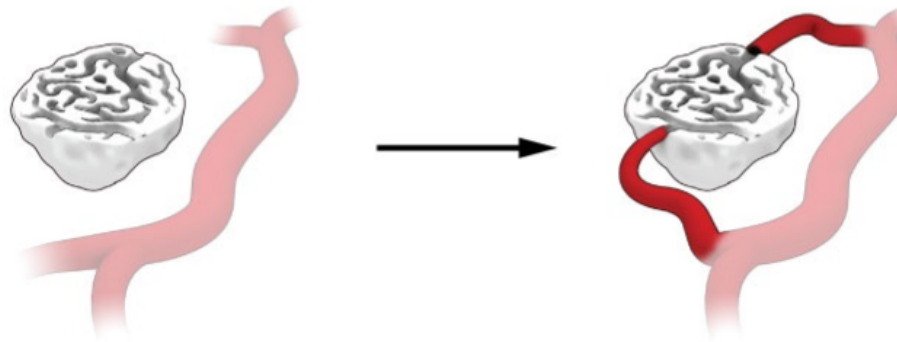
2 **Vessel grows into** the tumor mass.



Vasculogenic mimicry

1 Tumor cells organize themselves to **form vessellike channels**.

2 **Vessels hook up to** channels within the tumor mass.



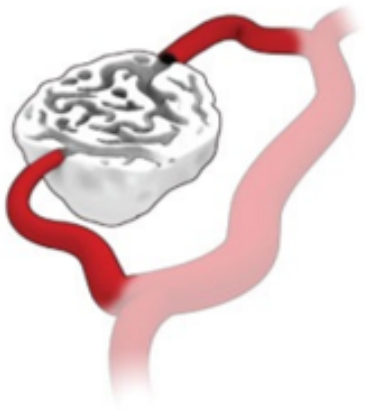
Vasculogenic mimicry in Osteosarcoma
Cai, X. S et al (2004)



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Discussion



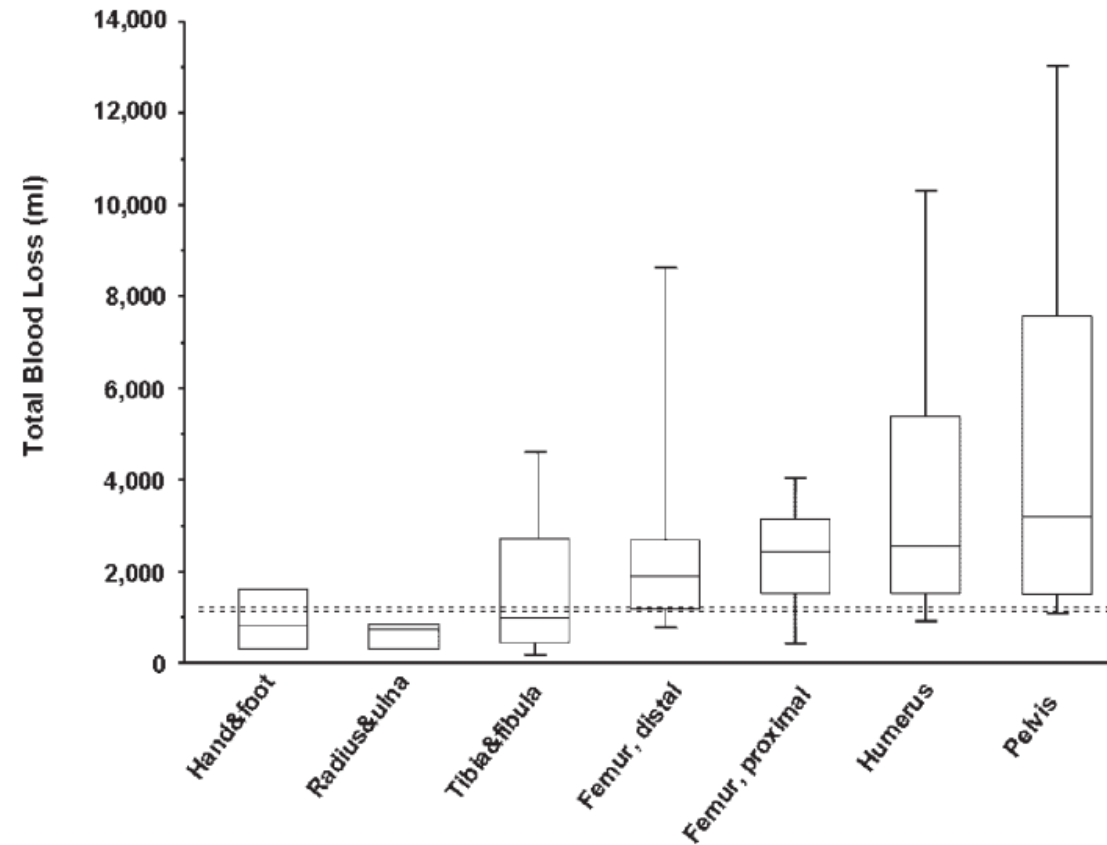
Uncontrollable
Blood Loss



- Blood Transfusion
- Operating time
- Surgical margins



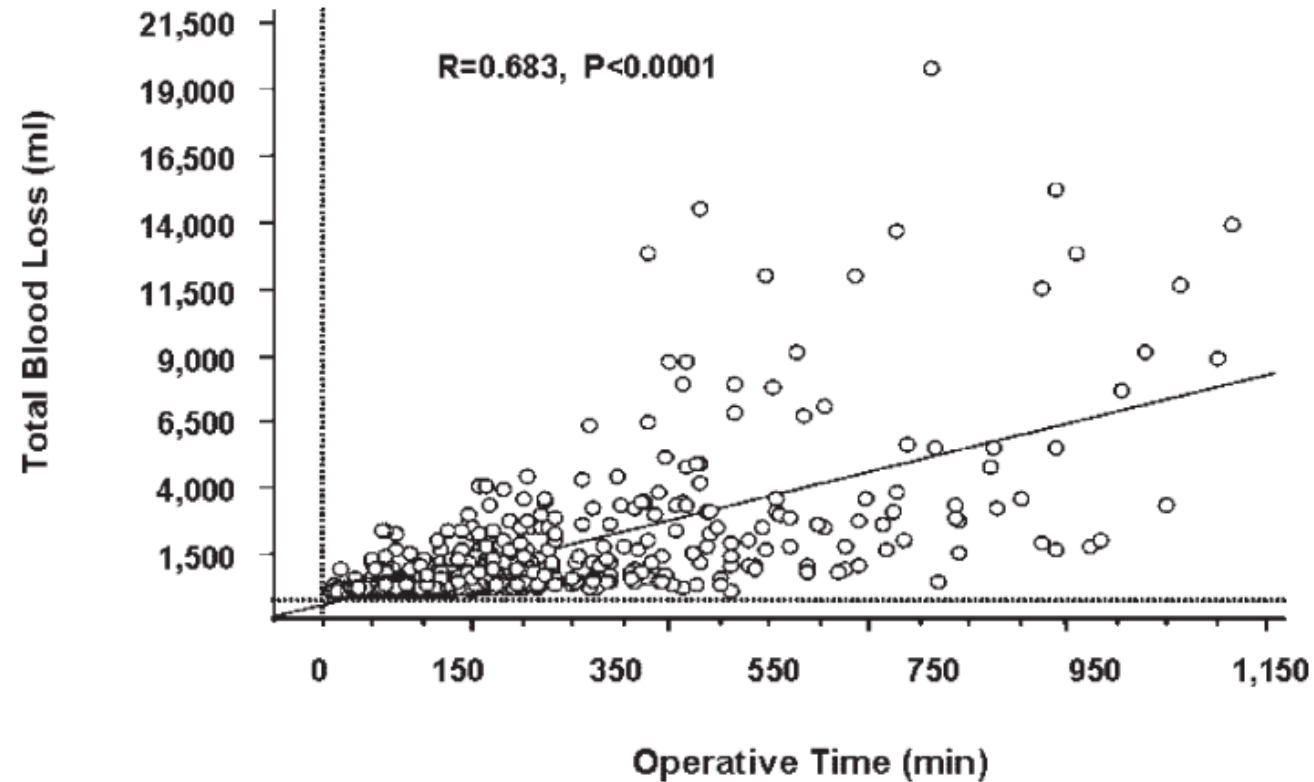
Discussion



Total blood losses associated with wide resections for bone tumors according to the surgical site
(Kawai et al, 2005)



Discussion



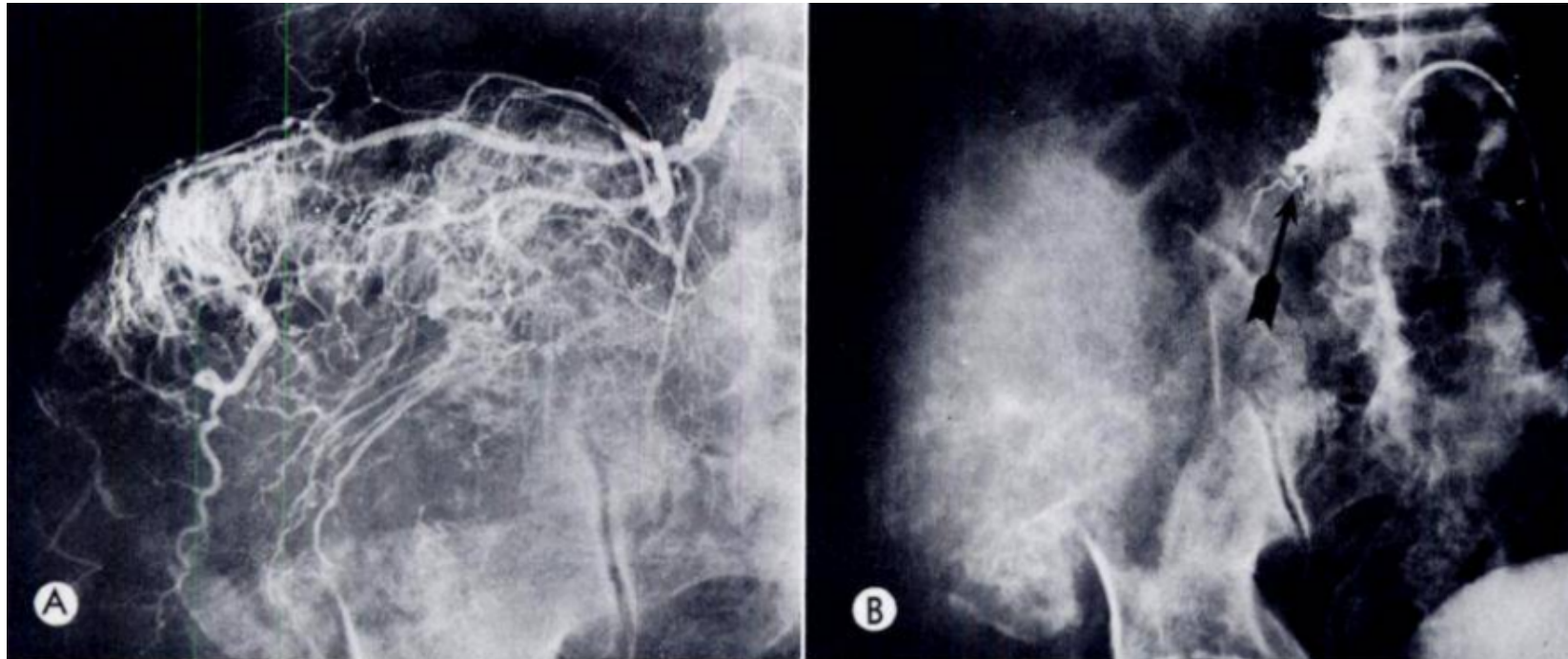
The relationship between total blood loss and the operative time
(Kawai et al, 2005)



SELECTIVE INTRA-ARTERIAL EMBOLIZATION OF BONE TUMORS*

A USEFUL ADJUNCT IN THE MANAGEMENT
OF SELECTED LESIONS

By **FRIEDA FELDMAN**, M.D., F.A.C.R.,† WILLIAM J. CASARELLA, M.D.,†
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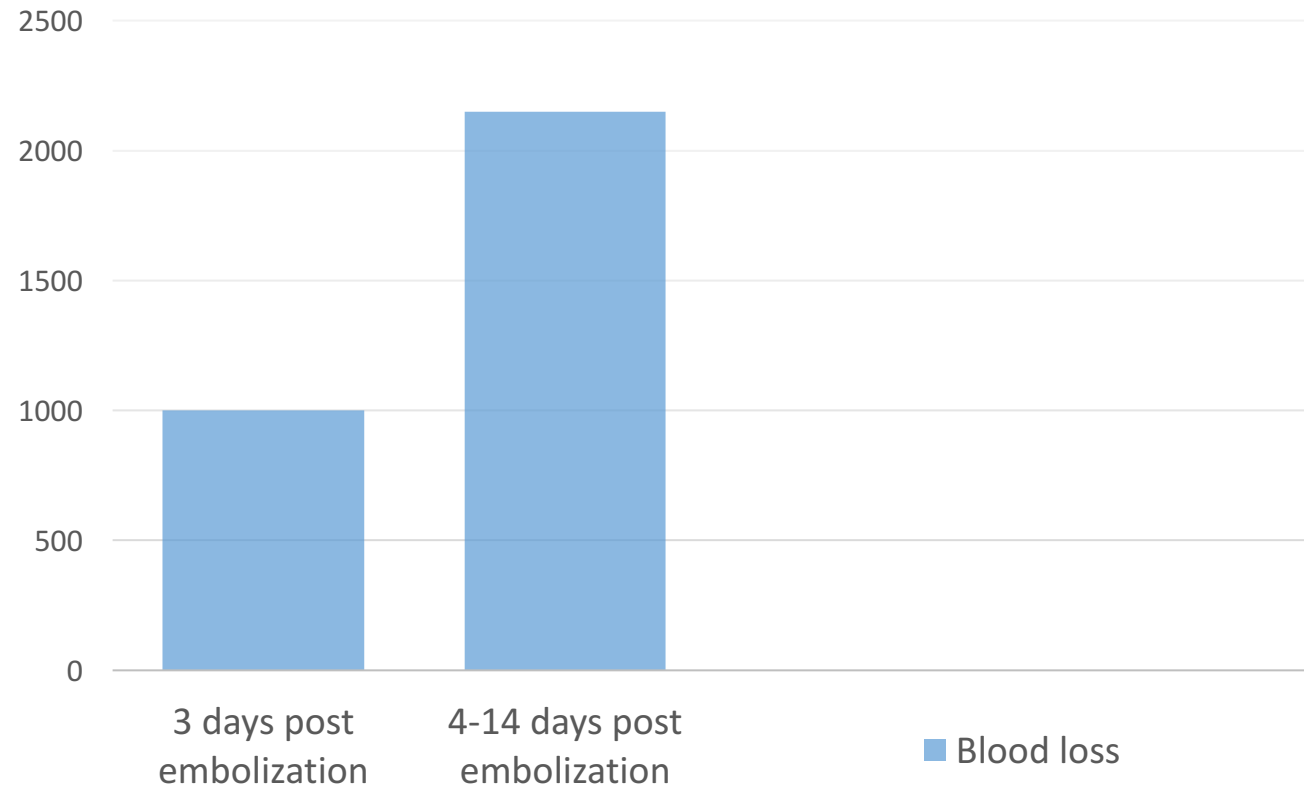


Discussion

	Embolization group		Control group	
	Blood loss	Transfusion	Blood loss	Transfusion
Pazionis et al (2014)	900ml	700ml	1700ml	1200ml
Jha et al (2017)	1300ml	700ml	1800ml	1400ml
El-khalek (2018)	Reduce 400ml			



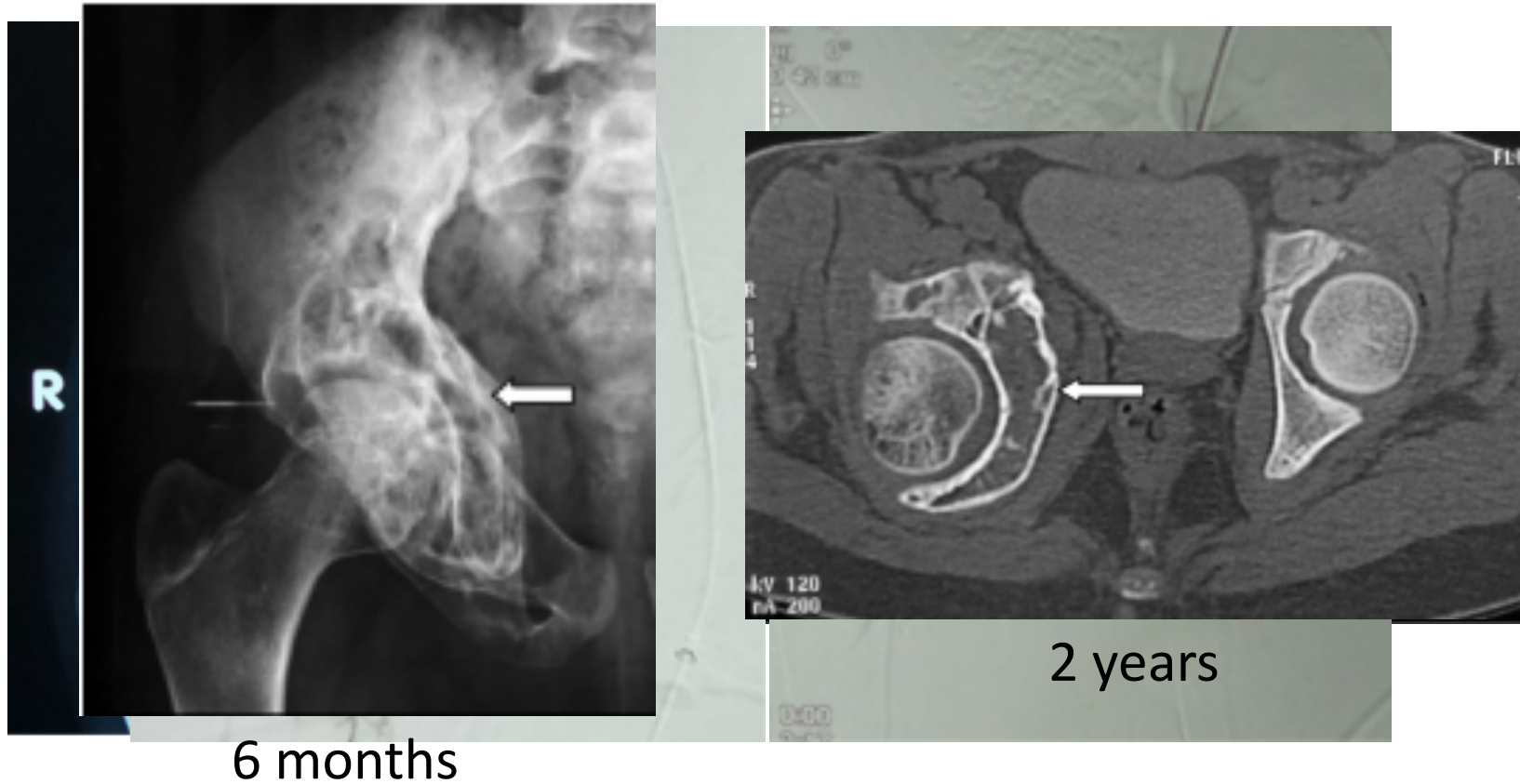
Discussion - Timing



Blood loss post embolization
(Barton et al, 2006)



Discussion – extended indication



Selective and superselective intraarterial embolization
(El-khalek et al, 2018)



Discussion – extended indication



1.5 years

Selective and superselective intraarterial embolization
(El-khalek et al, 2018)



Discussion - Complications

- Injury of the arteries and nerves
- Infection
- Pain due to ischemic necrosis of the tumor
- Post embolization syndrome (18-86%)
 - Mild pain
 - Fever
 - Malaise



Take home messages

- Preoperative embolization is relatively safe and effective treatment – reduction blood loss
- Best timing: 1-3 days post embolization
- In critical situations, this technique can be used as a curative treatment

