

JCR 2010

Popliteal artery aneurysm and occlusion

Korea University Anam Hospital

Cardiology

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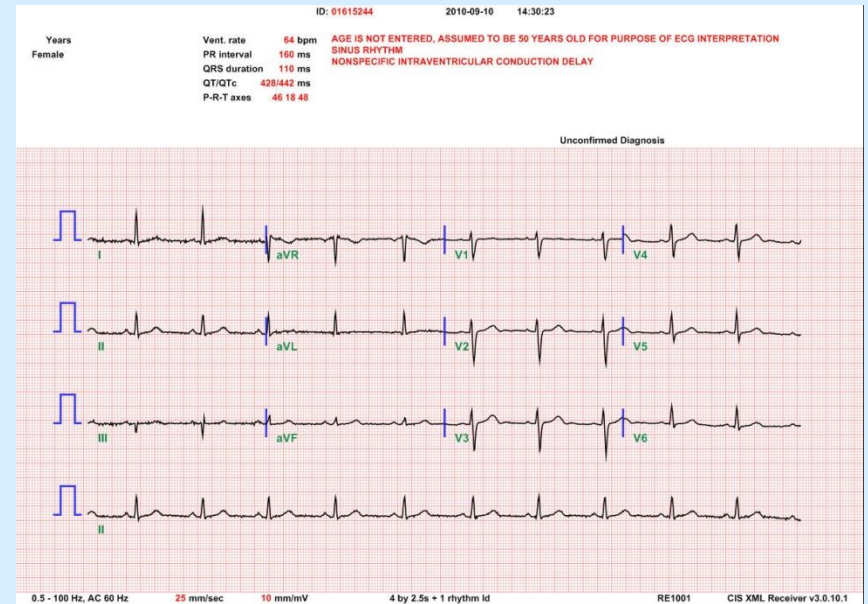
61 year old female

- 2010-9-10 13:30pm ER admission
- Chief complaint : numbness and weakness of right ankle and foot.
- Present illness : 61 year old female DM patient who lives in Whan-do underwent right total knee replacement arthroplasty 1 week ago in a local hospital (Dong-seo hospital) and her symptom developed since the surgery.

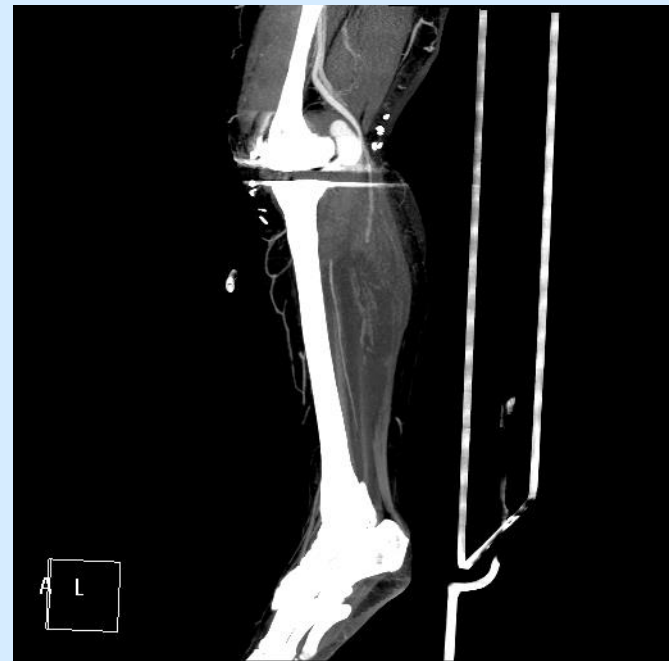
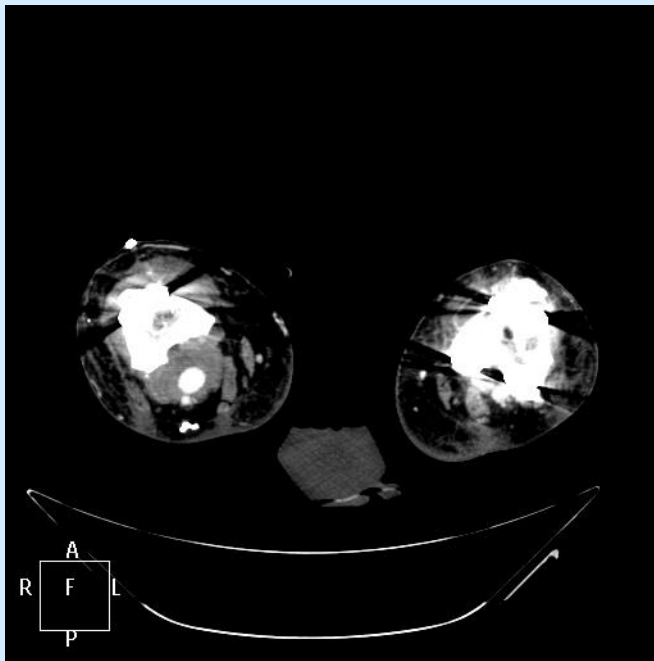
61 year old female

- History : she underwent left total knee replacement arthroplasty 2 weeks ago.
- HTN/DM (-/+), smoking/alcohol (-/-)
- Liver abcess operation (37 years ago)
- Physical examination revealed color change, cyanosis, motor weakness and sensory loss of right ankle, foot and toe.

Chest AP and ECG at ER



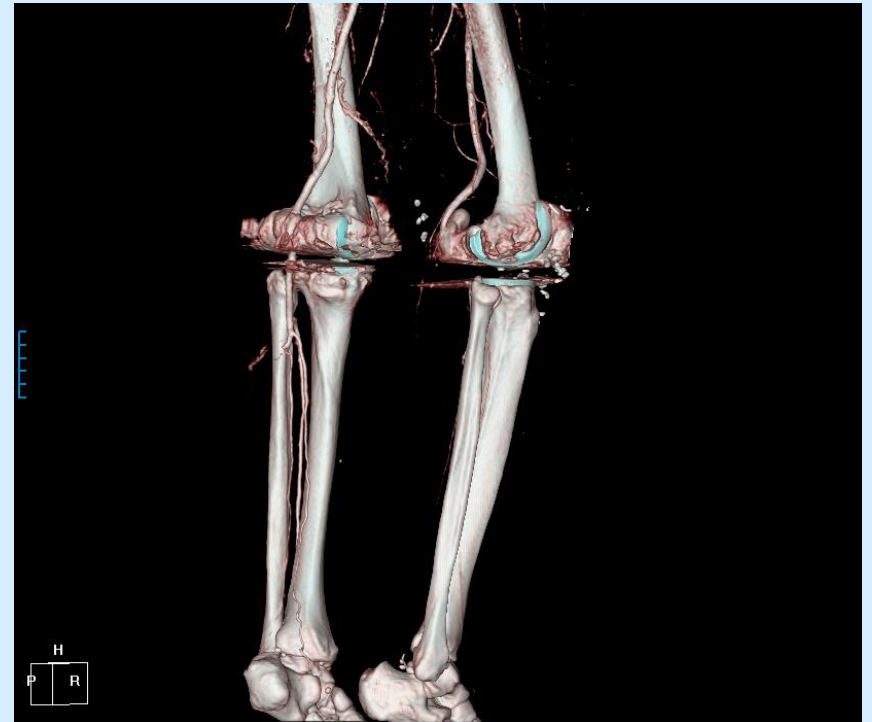
Lower extremity CT angio (2010-9-10)



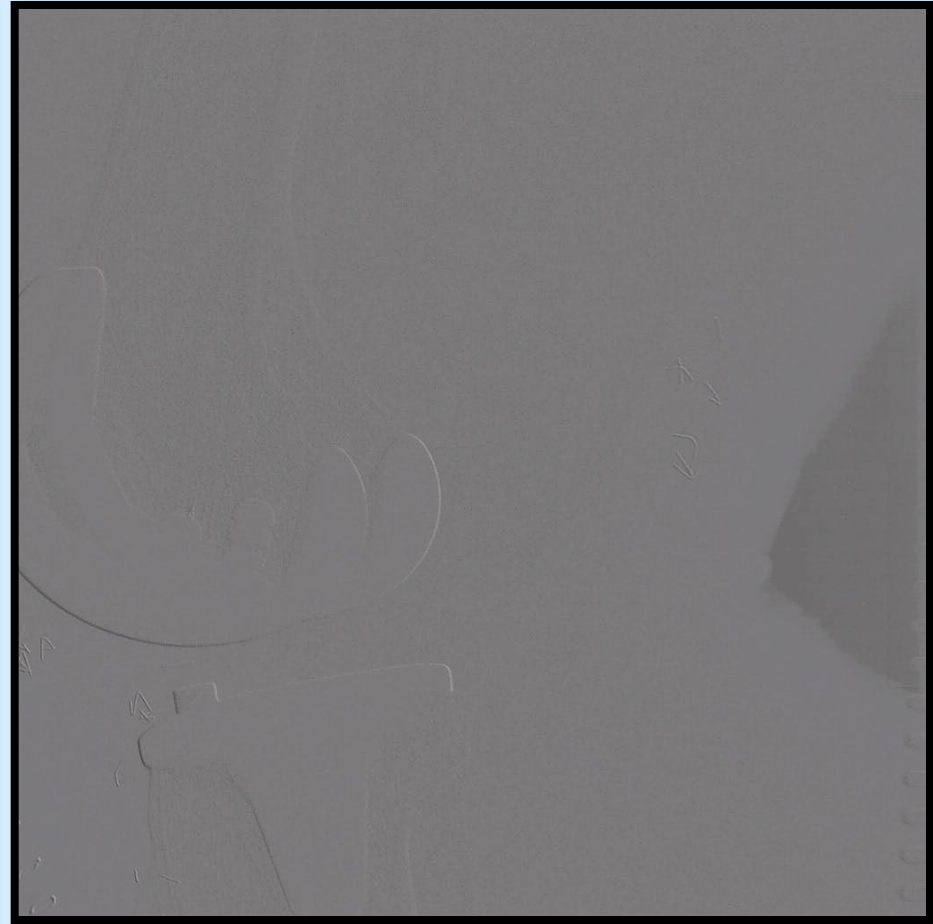
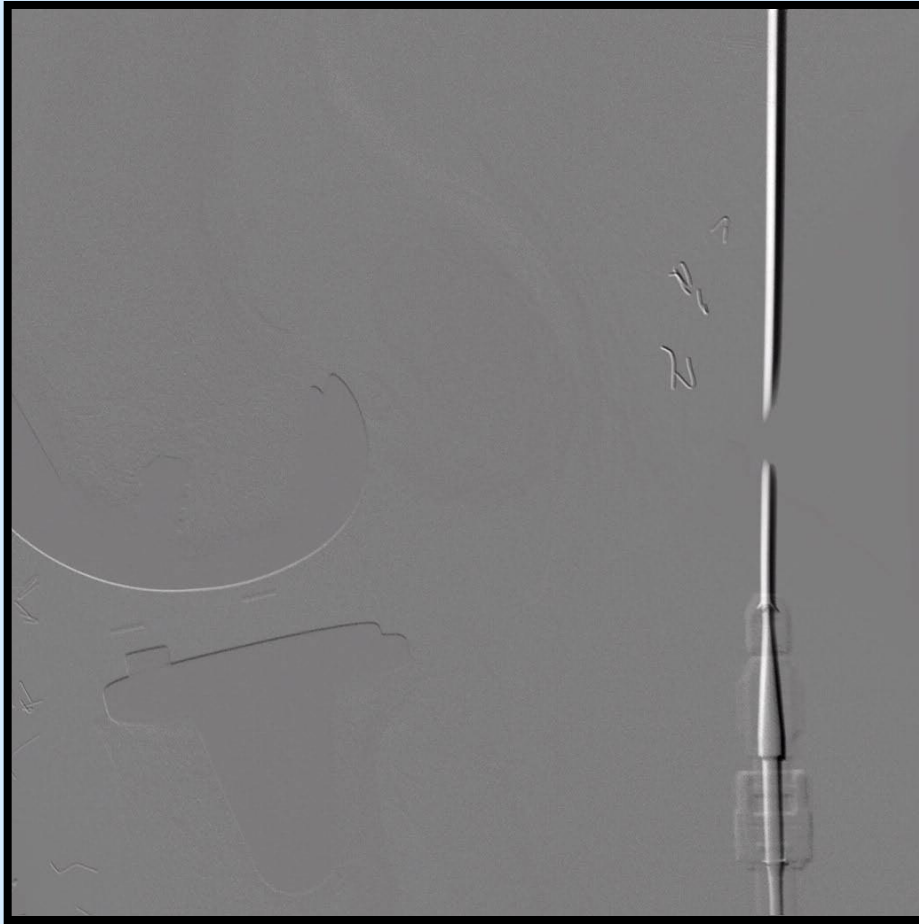
Lower extremity CT angio



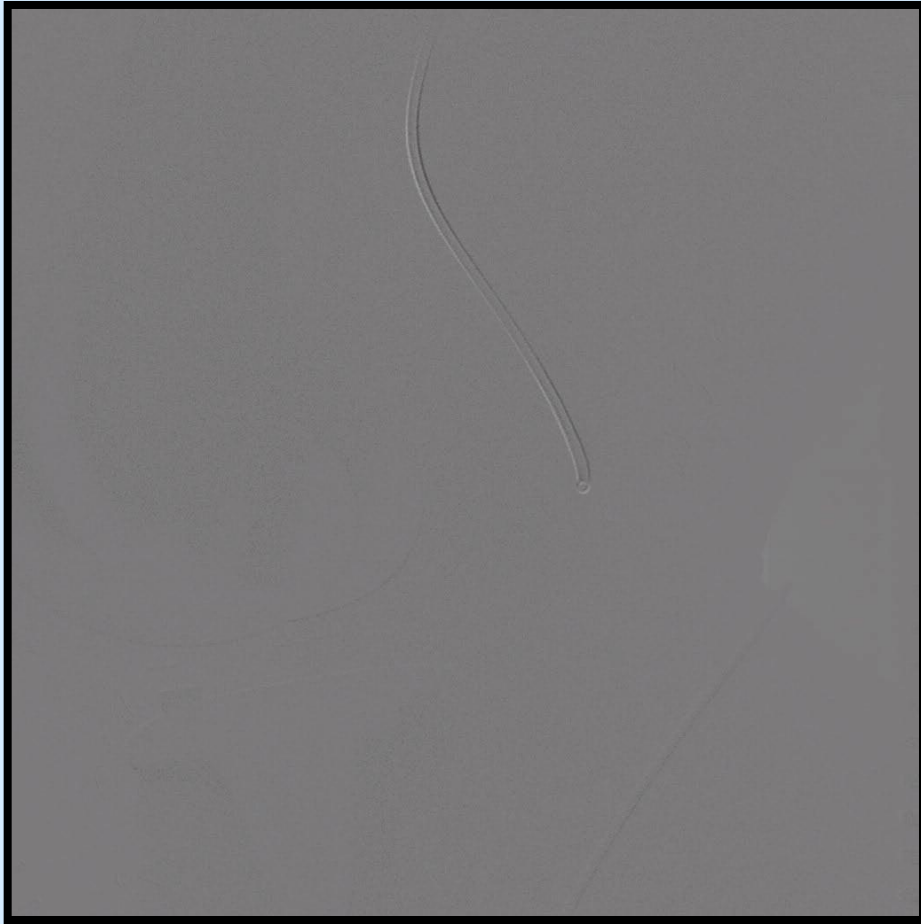
Lower extremity CT angio



Peripheral angio and PTA (2010-9-11)



Peripheral angio and PTA

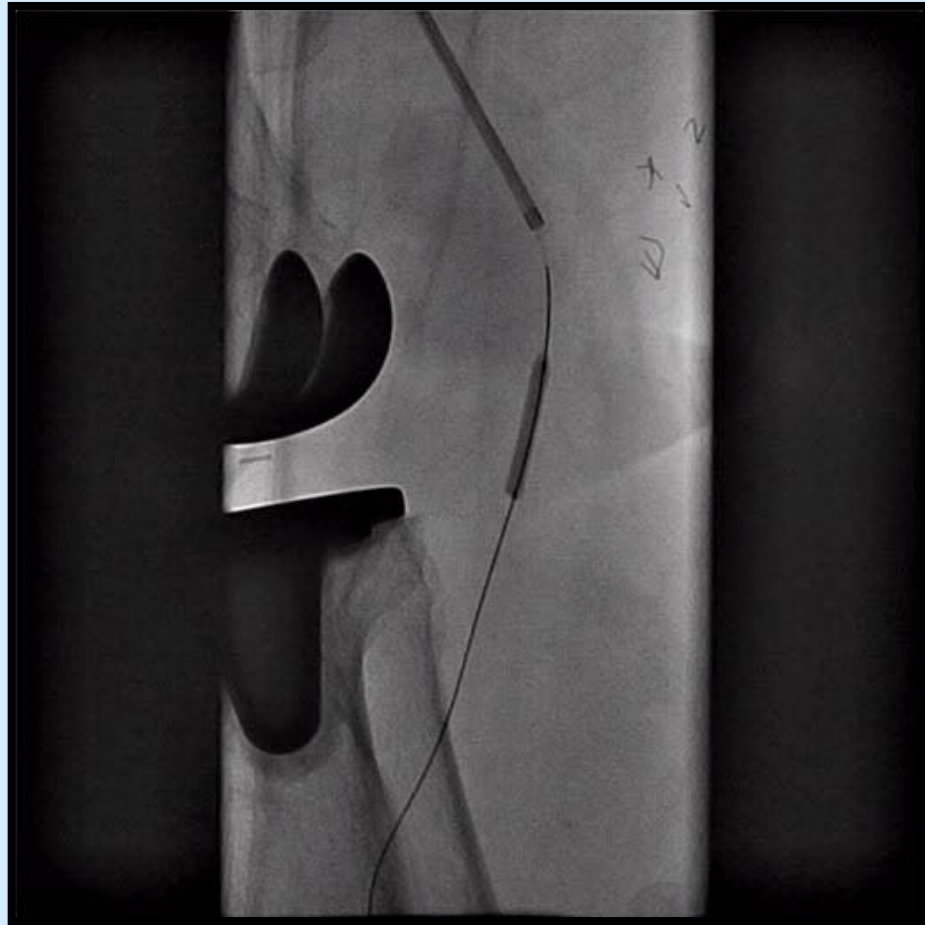


MP guiding

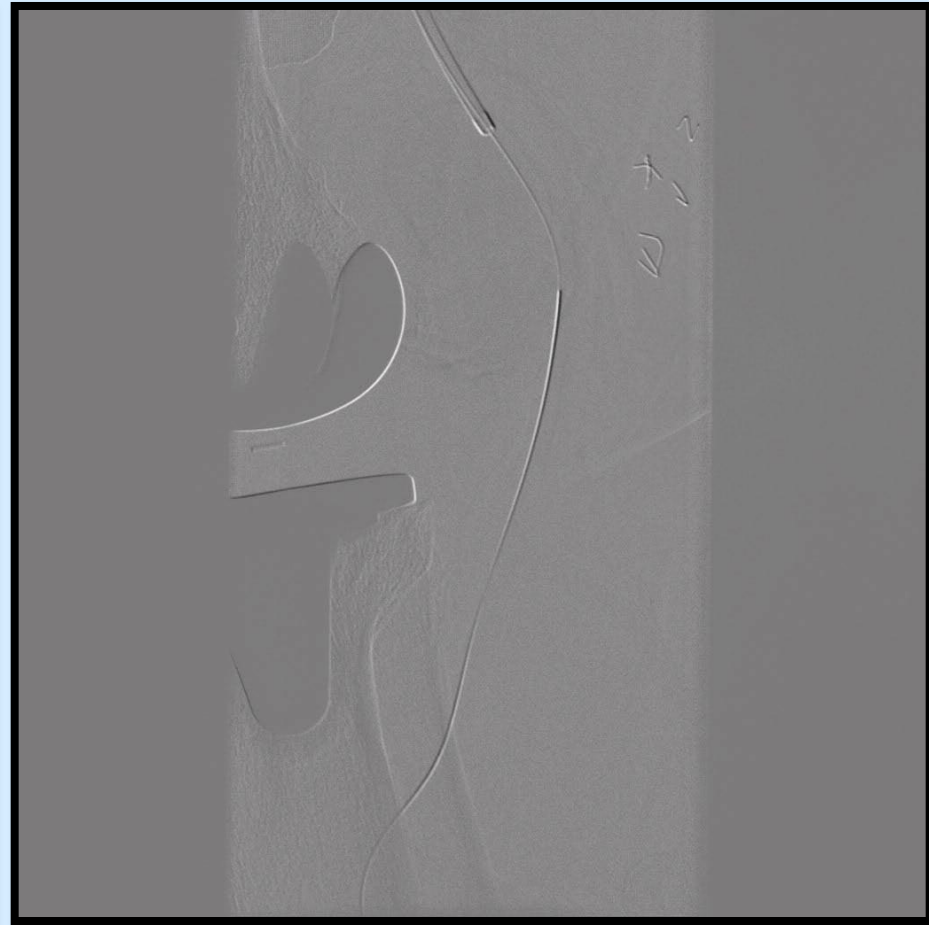


wiring

Peripheral angio and PTA

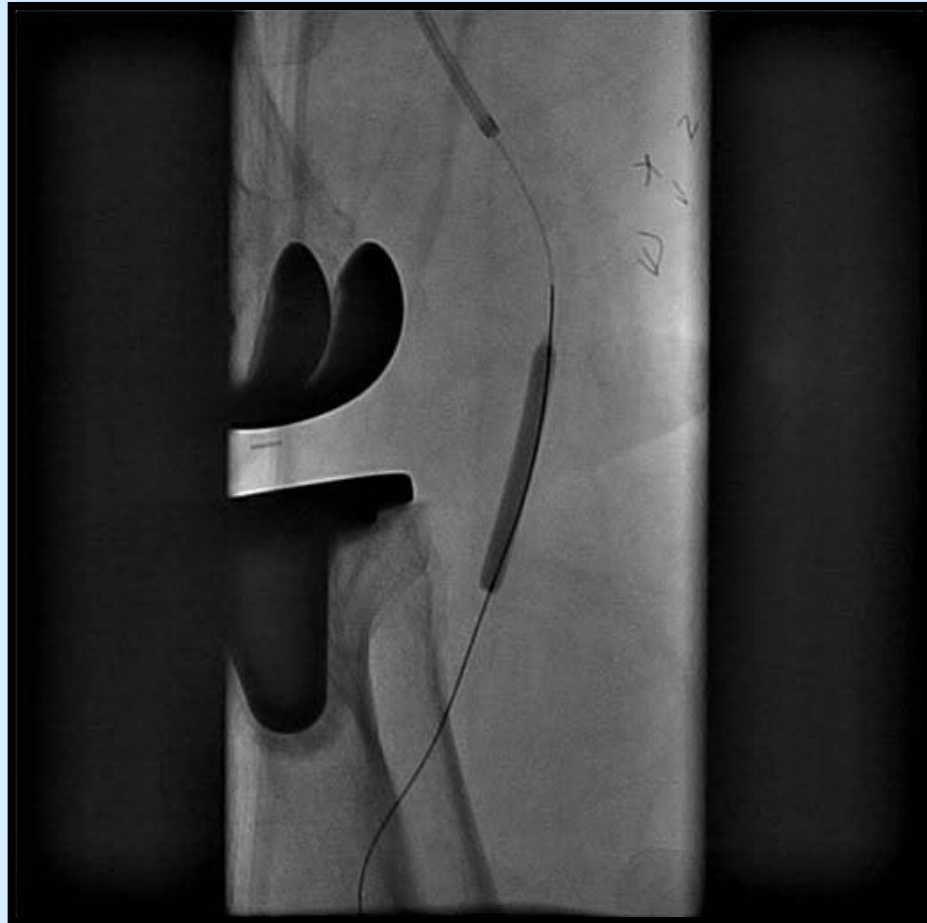


2.75X18mm ballooning



Post 2.75X18mm ballooning

Peripheral angio and PTA

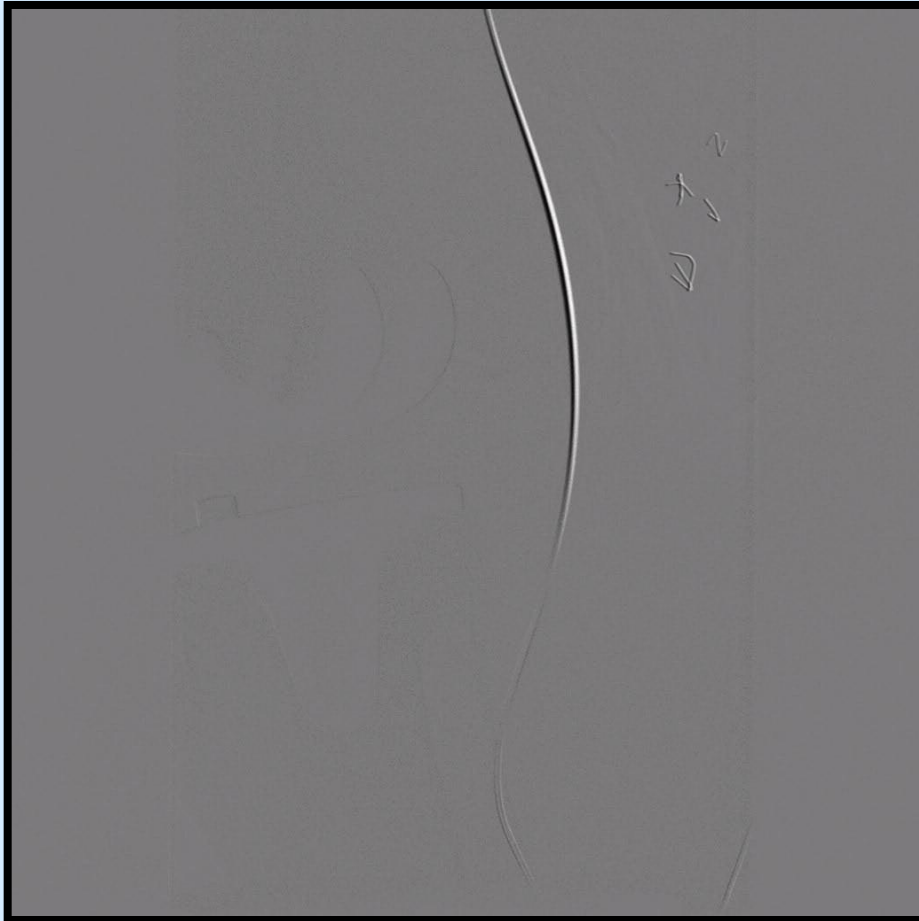


3.5X32mm ballooning

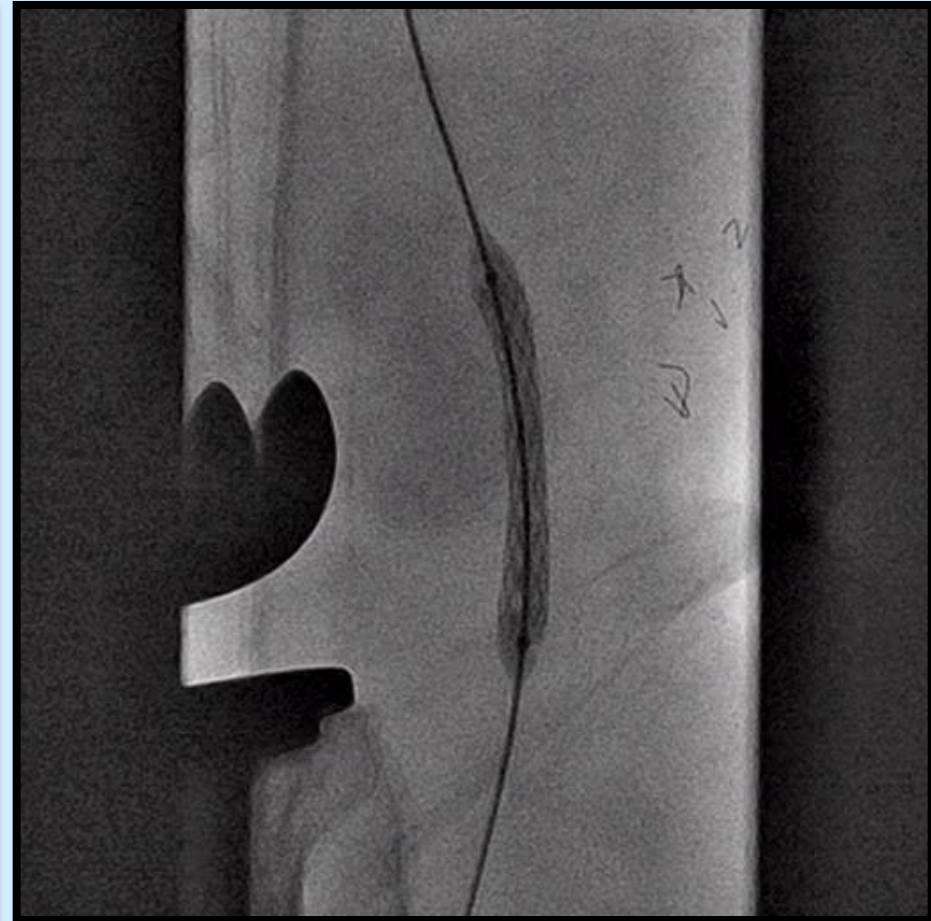


4.0X80mm ballooning

Peripheral angio and PTA

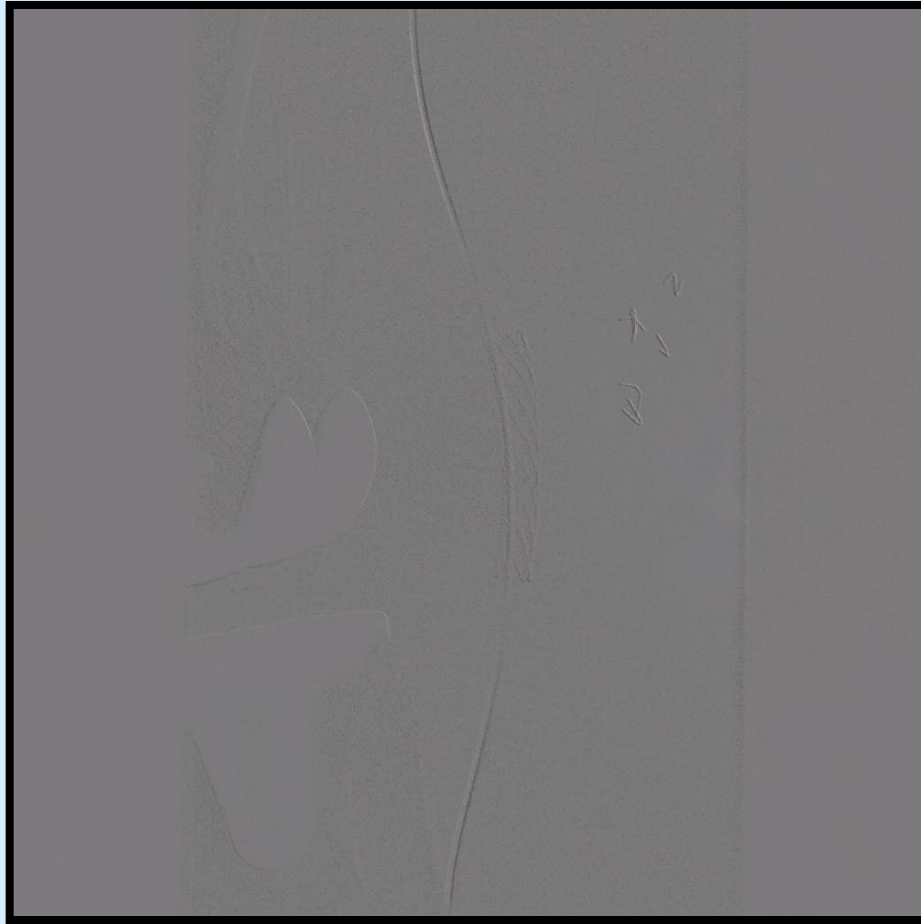


After 4.0X80mm ballooning



4~9X38mm Jo stent-graft : mounted on 5X40mm PTA balloon

Peripheral angio and PTA

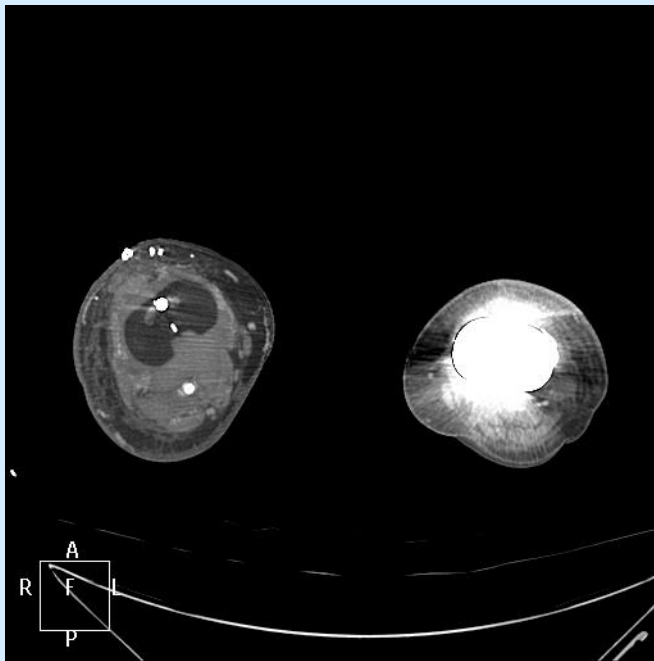


After stenting



Final angiogram

Follow up CT angio (2010-9-18)



Follow up CT angio



Progress

- After stenting, motor and sensory recovery.
- Treatment of rhabdomyolysis.
- Refer to local hospital for rehabilitation.
- consider bypass operation, if needed.

Popliteal Artery Aneurysms

- Relatively uncommon in the general population, ~0.1%
- 70% of all peripheral aneurysms
- 64% are bilateral and 62% have concomitant AAAs.
- Risk factors : CAD, HTN, CVD, smoking

Vascular injuries associated with elective orthopedic procedures

- Jeffrey S. Wilson et al.
- Retrospective review about 4350 op
- 1997-2002
- 20 patients, 27 arterial injuries
- Incidence 0.005%
- M:F = 11:9
- Mean age = 64.4 (24-88)

Arterial injuries by location and type

Location of arterial injury	n (%)	Type of arterial injury	n (%)
Popliteal artery	12 (44)	Arterial thrombosis/occlusion	21 (78)
Tibial artery	5 (18)	Laceration/avulsion	3 (11)
Superficial femoral artery	4 (15)	Pseudoaneurysm	3 (11)
Iliac artery	3 (11)		
Common femoral artery	2 (7)		
Profunda artery	1 (4)		

Vascular injuries associated with elective orthopedic procedures

< Managements >

- Vein bypass grafting (n=15)
- Primary repair (n=3)
- Thrombectomy with thrombolysis (n=2)
- Above knee amputation (n=1)

Vascular injuries associated with elective orthopedic procedures

- Injured arterial segment has Preexisting atherosclerotic disease (33%)
- 15 patients (71%) had prior surgery in proximity to the arterial injury
- 9 (43%) had prior traumatic injury
- Risk factors : Joint surgery, PAD
DM, HTN, claudication, previous vascular surgery

Thank you !