

# POSTERIOR APPROACH TO THE POPLITEAL TO PERONEAL BYPASS



## INTRODUCTION

The posterior approach to the peroneal artery is seldom used but allows for excellent exposure and should be considered where the inflow and outflow vessel can be accessed posteriorly.

## OUR PATIENT

92-year-old male with severe peripheral vascular disease underwent right popliteal to distal peroneal bypass via the posterior approach using ipsilateral reversed greater saphenous vein.

Physical Exam:

- palpable bilateral femoral pulses
- palpable left bypass graft pulses
- severely dampened monophasic signal of right peroneal artery at the ankle

The right lower extremity ankle brachial index was 0.42.

## OPERATION IN DETAIL

- Longitudinal incision in the distal posterior calf lateral to the Achilles tendon was made
- Achilles tendon and soleus muscle was retracted medially. Flexor hallucis longus was identified laterally.
- The distal peroneal artery was dissected free from adjacent peroneal veins.
- Subfascial tunnel was created using a tunneler and the previously harvested great saphenous vein was anastomosed end to side to both popliteal and peroneal artery.

Doppler examination demonstrated widely patent bypass graft and robust signals at the distal posterior tibial artery within the foot.

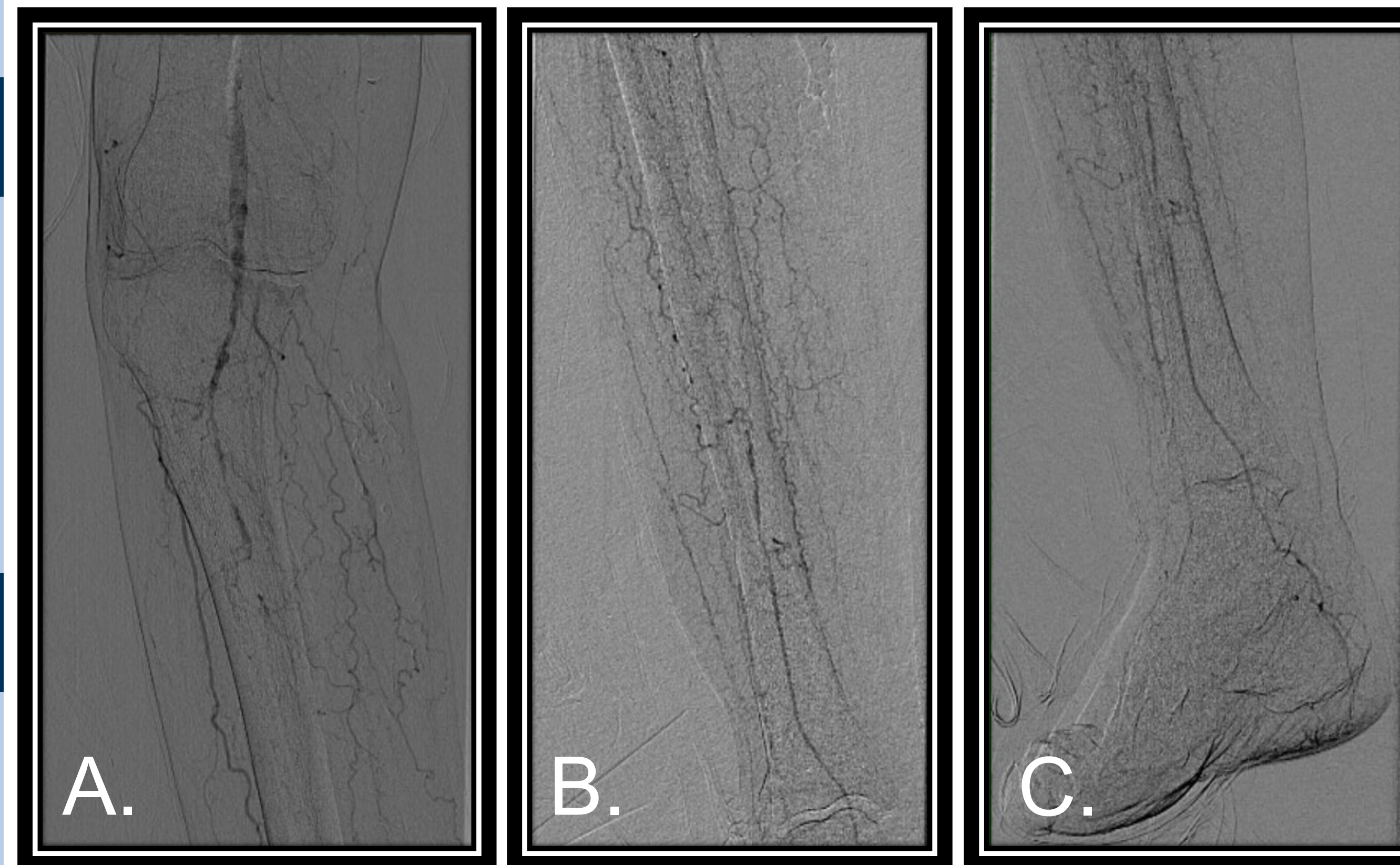


Figure 1. - diagnostic angiogram of the right lower extremity.

A. Atherosclerotic popliteal artery

B. Severe tibioperoneal occlusive disease with total occlusion of all three branches

C. Peroneal artery reconstitution into posterior tibial artery

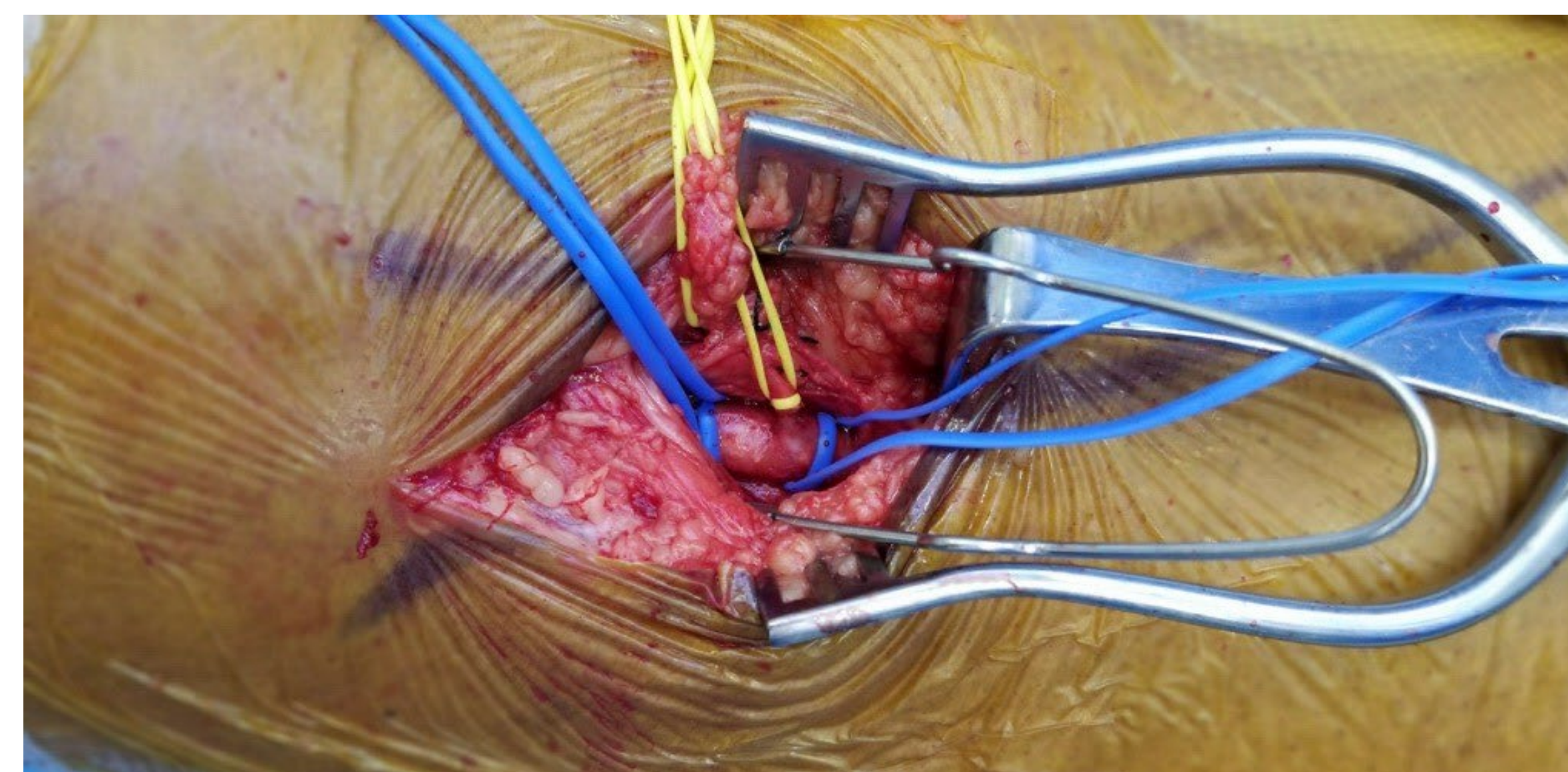
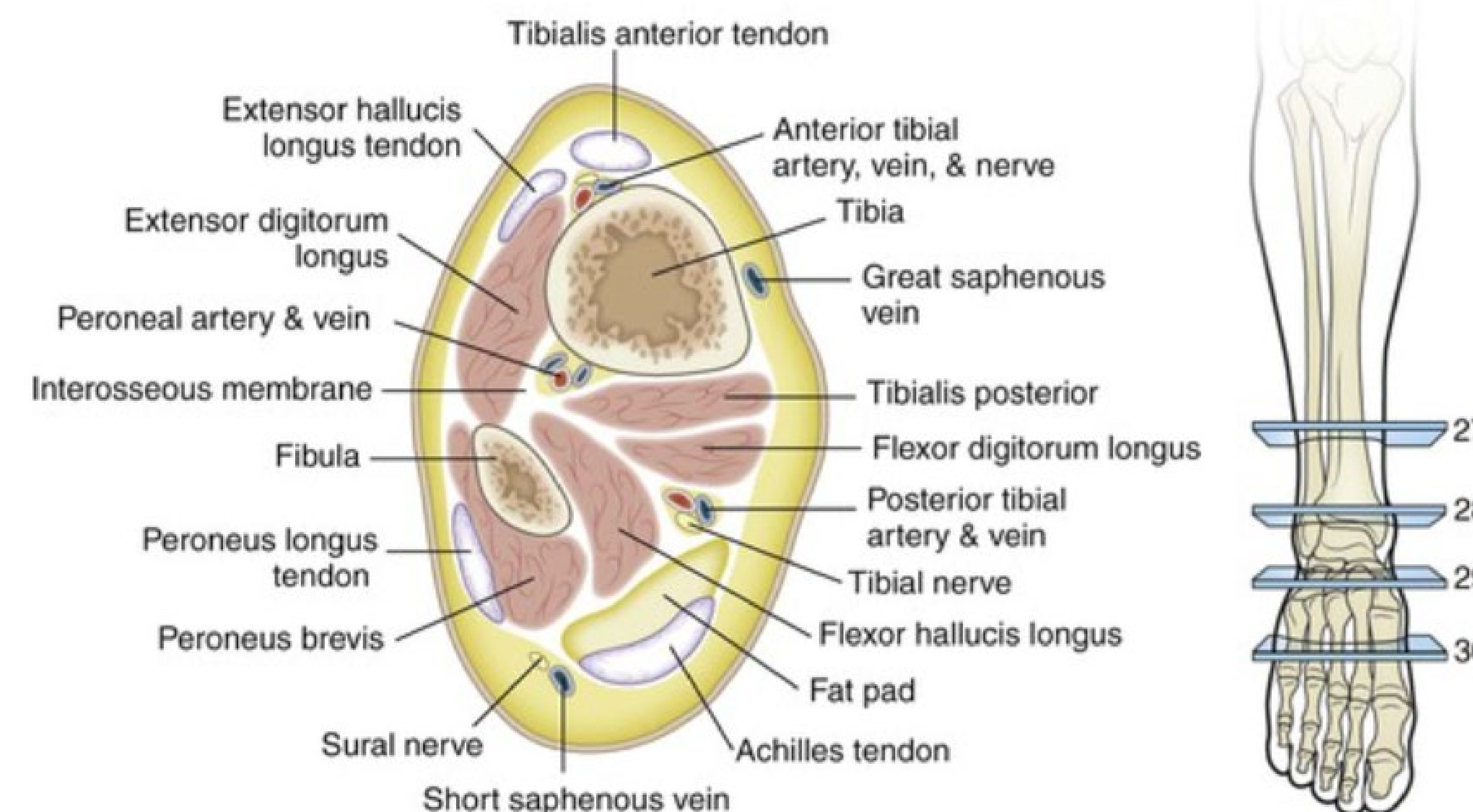


Figure 2. Posterior popliteal artery exposure. Blue loops on popliteal artery, yellow loops on branching vessel

## DISCUSSION

The peroneal artery is traditionally approached medially or laterally.

- The medial approach is commonly taken for proximal to mid peroneal artery exposure and requires significant muscular dissection
- Laterally, the peroneal artery runs parallel to the fibula and is partially covered by the flexor hallucis longus and posterior tibialis and involves a fibulectomy.

This is the third reported case of posterior approach to the peroneal artery.



Figure 3. Distal peroneal artery posterior exposure with distal bypass graft fashioned.

## CONCLUSION

The posterior exposure should be considered as an equal approach to revascularize the distal peroneal artery.

## REFERENCES

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