Life Threatening Hemorrhage as a Complication of Endoscopic Gastrocnemius Recession

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INTRODUCTION
A patient presented with life threatening hemorrhage from a ruptured posterior tibial artery pseudoaneurysm following an attempted endoscopic gastrocnemius recession (aponeurosis transection) for a diabetic foot ulcer. Previously reported complications include injury to the sural and saphenous nerve and the lesser saphenous vein. Our case of a pseudoaneurysm from a transection of the posterior tibial artery is unique.

ENDOSCOPIC GASTROCNEMIUS RECESSSION
A procedure used to alleviate equinus contracture by transecting the aponeurosis of the gastrocnemius muscle. A 1 cm incision is made medially 2 cm posterior to the tibia approximately 12 cm above the malleolus. Through a slotted cannula, the aponeurosis of the gastrocnemius is divided with a scalpel or endoscopic knife as it transitions into the Achilles tendon. The anatomical location of the posterior tibial (PT) artery is illustrated in Fig 1 and 2.

CASE REPORT
A 48 year old male presented 2 months after a failed endoscopic gastrocnemius recession for an acute arterial bleed from the non-healed wound site. A large amount of blood was lost at home when spontaneous bleeding began while the patient was in the bathroom (Fig 3) and approximately 500 mL en route to the hospital before a temporary control could be established with a pressure dressing (Fig 4).

SURGICAL INTERVENTION
In the operating room, a pseudoaneurysm was found of the posterior tibial artery which had been completely transected (Fig 5). With a palpable dorsalis pedis artery, the pseudoaneurysm capsule resected and the two ends of artery were ligated. The wound partially approximated, packed, and later treated with a negative vacuum dressing with complete secondary closure by three months (Fig 6). Non-invasive vascular studies demonstrated normal flow to the foot (Fig 7).

CONCLUSIONS
Gastrocnemius recession and Achilles tendon lengthening are at risk for arterial injury due to close proximity of the vessels. Awareness of these anatomic relationships may help prevent such complications. Should unexpected vascular injury occur, early vascular surgery consultation should be obtained. The posterior tibial artery can be safely ligated if sufficient collateral flow is evident, as acutely demonstrated by a palpable dorsalis pedis artery in the operating room with posterior tibial artery temporary occlusion.