ePoster

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Spontaneous sub-amputation from atypical critical limb ischemia in a patient without classical risk factors

Alsadig Suliman /General Surgery Registrar, Sudan Medical Specialization Board, Sudan

INTRODUCTION

Spontaneous sub-amputation is a rare and extreme manifestation of critical limb ischemia (CLI). It usually occurs in patients with advanced atherosclerosis and conventional risk factors such as diabetes, smoking, and hypertension. Proximal limb involvement, such as spontaneous loss of the foot, is exceptionally uncommon. This case highlights an atypical presentation in a patient without classical vascular risk factors, managed under severe resource limitations.

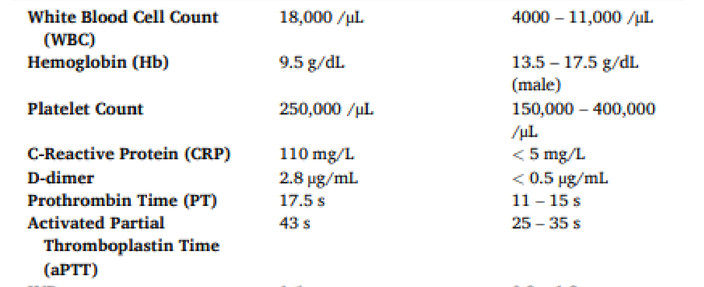
AIM

To describe an unusual case of spontaneous foot sub-amputation without lifestyle-related vascular risk factors.
To illustrate adaptive surgical innovation using improvised tools in a low-resource setting.
To highlight the importance of early recognition and timely surgical decision-making

Fig 3 Laboratory and Imaging Investigations with Reference Ranges

Test	Result	Reference Range
White Blood Cell Count (WBC)	18,000 /μL	4000 – 11,000 /μL
Hemoglobin (Hb)	9.5 g/dL	13.5 – 17.5 g/dL (male)
Platelet Count	250,000 /μL	150,000 – 400,000 /μL
C-Reactive Protein (CRP)	110 mg/L	< 5 mg/L
D-dimer	2.8 μg/mL	< 0.5 μg/mL
Prothrombin Time (PT)	17.5 s	11 – 15 s
Activated Partial Thromboplastin Time (aPTT)	43 s	25 – 35 s
INR	1.6	0.8 – 1.2
Hemoglobin A1c (HbA1c)	6.2 %	< 5.7 % (normal), 5.7–6.4 % (pre-diabetes)
Random Blood Glucose	100 mg/dL	70 – 140 mg/dL
Creatinine	2.8 mg/dL	0.6 – 1.3 mg/dL
Serology for Syphilis	Negative	Negative
Chest X-ray	Normal	–
Electrocardiogram (ECG)	Sinus tachycardia	Normal sinus rhythm
Ultrasound Abdomen (after 1 week)	No significant abnormality detected; kidneys normal in size	Normal

Fig 4 Timeline leg pain onset to recovery (Week 4)



METHODS

A 76-year-old male presented with spontaneous left foot detachment during sleep after two months of exertional leg pain and two days of worsening gangrene and fever. The patient had no history of diabetes, hypertension, or smoking. Due to lack of vascular imaging and standard instruments, emergency above-knee amputation was performed, and intraoperative thrombus extraction was achieved using a Foley urinary catheter in place of a Fogarty catheter.

Fig 1. spontaneous sub-amputation/ extensive gangrene proximal calf /bone transection /residual muscle attachments.

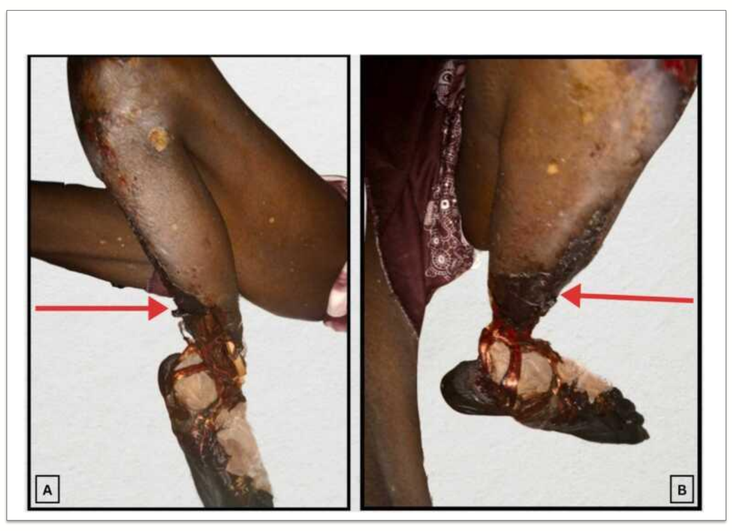


Fig. 1 Clinical presentation of spontaneous sub-amputation. (A) Lateral and (B) medial views of the left lower limb showing extensive gangrene extending to the proximal calf and the natural plane of separation approximately 8 cm above the ankle, with visible bone transection and residual muscle attachments. An arrow indicates the plane of extent of gangrene..

Fig 2. Extracted femoral artery thrombus removed using an improvised Foley catheter technique, shown beside syringe.

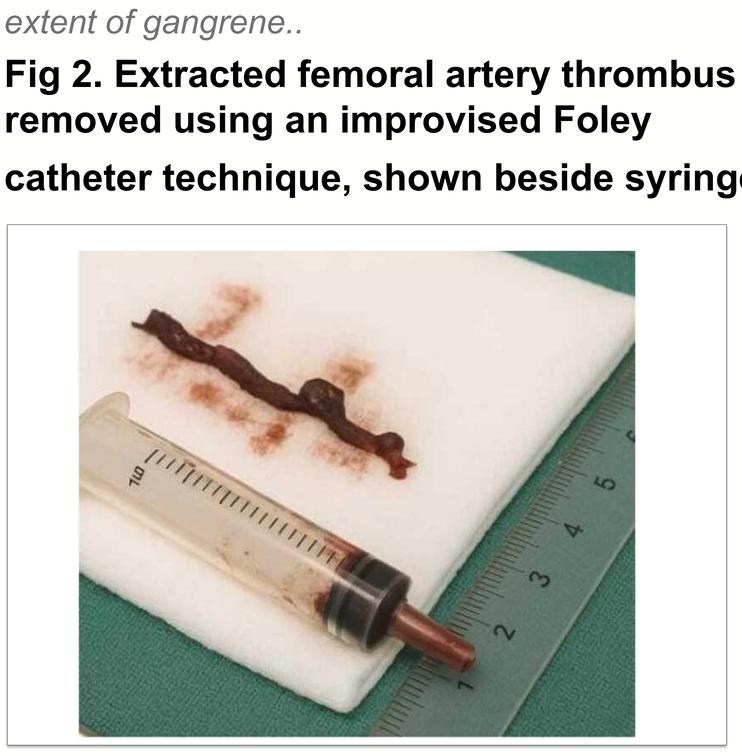


Fig. 2 Extracted thrombus specimen obtained using a Foley catheter. Segment of thrombus removed intraoperatively via an improvised technique using a Foley urinary catheter, placed beside a 10 mL syringe and a measurement scale for size reference. The thrombus was extracted from the femoral artery following spontaneous sub-amputation and septic presentation.

RESULTS

Surgery:
Above-knee amputation with improvised thrombectomy.
Intraoperative findings:
Organized thrombus consistent with acute-on-chronic occlusion.
Postoperative course:
Stabilization with IV antibiotics, wound healing achieved, and patient discharged with secondary prevention (aspirin, statin).
Follow-up:
At 1 month, the stump was healed and no contralateral limb ischemia was noted.

DISCUSSION

This case underscores that CLI and spontaneous sub-amputation can occur even without conventional vascular risk factors, with overlooked contributors such as prediabetes playing a role. Limited access to imaging and vascular devices necessitated surgical adaptability, demonstrating how improvised use of a Foley catheter can be lifesaving. The case also reflects broader challenges in resource-limited settings, where improvisation and clinical judgment substitute unavailable diagnostics and technologies.

CONCLUSIONS

Spontaneous sub-amputation, though rare, can occur in atypical patients. Early recognition, timely surgical intervention, and adaptive strategies are crucial for survival in low-resource environments.

Video of improvised technique

Full case report