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CASE REPORT

Left Atrial Myxoma: Immediate Presentation, Diagnosis, and Treatment

Richard Casazza, MAS; Neel Patel, MD; Allan Mattia, MD; Paul Saunders, MD; Arsalan Hashmi, MD; Greg Ribakove, MD

Cardiac myxomas are histologically benign tumors; however, they may lead to life-threatening complications. Myxomas are the most common primary cardiac tumor. Roughly 75% of myxomas originate in the left atrium at the mitral annulus or the fossa ovalis border of the interatrial septum. Twenty percent (20%) arise from the right atrium, while 5% stem from both atria and the ventricle.¹ Myxomas are linked with several difficulties, including outflow obstruction and embolic events. Patients with left-sided myxomas usually develop signs and symptoms associated with mitral valve obstruction or regurgitation, left-sided heart failure, and secondary pulmonary hypertension.

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ULTRA-HIGH-PRESSURE BALLOONS

The OPN NC Balloon in Complex PCI: Expanding What's Possible

CLD talks with Khaldoun Alaswad, MD, FACC, FSCAI.

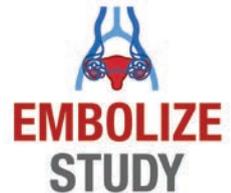


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CLINICAL TRIAL UPDATE

EMBOLIZE: Bringing Randomized Evidence to Pelvic Vein Embolization

CLD talks with Ronald S. Winokur, MD, FSIR, FAVLS, RPVI.



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CASE REPORT AND DISCUSSION

“Wound to Amputation” – How Insurance Companies Are Dictating the Clinical Care of Chronic Limb-Threatening Ischemia From Salvageable to Non-Salvageable Limb

Ivana Dilip Kumar, Research Associate; Anshita Kumari, MBBS; Kusum Lata, MD, FACC, FSCAI



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“Wound to Amputation” — How Insurance Companies Are Dictating the Clinical Care of Chronic Limb-Threatening Ischemia From Salvageable to Non-Salvageable Limb

Ivana Dilip Kumar, Research Associate; Anshita Kumari, MBBS; Kusum Lata, MD, FACC, FSCAI

Chronic limb-threatening ischemia (CLTI) is the most severe form of peripheral vascular disease, particularly involving the below-knee arteries. Management of CLTI hinges on a combination of guideline-directed medical therapy and timely revascularization to avoid limb loss.¹ However, below-knee arterial disease is particularly challenging: lesions are often long, calcified, small in caliber, and require significant technical skill, time, and advanced tools to treat effectively.²

In CLTI patients with diffuse below-the-knee arterial disease, endovascular therapy is frequently the primary revascularization strategy, in absence of suitability of surgery (lack of vein conduit, high surgical risk, lack of target vessel due to diffuse arterial disease).³

However, access to timely intervention can be disrupted by insurance denials, which have been shown to increase the risk of both minor and major amputations. Unclear and

non-clinically grounded insurance policies reduce the likelihood that patients will receive timely, limb-saving interventions.

This case highlights the real-world consequences of delayed revascularization due to insurance denial, demonstrating how a potentially salvageable limb can deteriorate into a non-salvageable condition.

Case Presentation

A 68-year-old male presented with critical limb ischemia involving the left toes. Over several weeks, the wound worsened, spreading to adjacent toes. Debridement was performed by a podiatrist, who advised bone resection and potential vascular intervention to support healing (Figures 1-2).

Despite appropriate wound care and antibiotic therapy, the wound continued to deteriorate. His history included well-controlled diabetes (HbA1c 5.1), hyperlipidemia managed with statins and PCSK9 inhibitors (evolocumab), and hypertension under control. He was a non-smoker, non-drinker, and had a healthy body

A request for urgent peripheral angiography to assess and treat worsening left lower extremity ischemia was denied by insurance.

mass index. He had undergone a previous left below-knee revascularization (anterior tibial and peroneal arteries) five months earlier, which had led to near-complete wound healing, until his recent deterioration.

A request for urgent peripheral angiography to assess and treat worsening left lower extremity ischemia was denied by insurance. The reason cited was “revascularization in this condition has not been shown to improve outcomes” (Figure 3).

Over the following three months, repeated appeals and document submissions were made, with the patient’s clinical status worsening significantly (Figures 4-5).

Ultimately, after more than four months of delay, the insurance company approved the procedure (Figure 6).

Intervention

The revascularization was scheduled. Diagnostic angiography revealed:

- Moderate disease in the distal superficial femoral artery (SFA) and severe



Figures 1-2. Critical limb ischemia in the left toes, during debridement by a podiatrist.

CPT 37227 = Non-authorized all other codes approved / NAR

Clinical Rationale:

Your doctor told us that your leg blood vessels are too narrow or too stiff. This stops the blood from moving properly. Your doctor wants to do a procedure to remove plaque buildup from the inside of a blood vessel (atherectomy). This procedure has not been shown to improve health outcomes. For this reason, we cannot approve this procedure. We suggest that you speak with your doctor to see if another procedure might be appropriate for you. We used Carelon Medical Benefits Management Clinical Guideline titled Endovascular Revascularization for Management of Arterial Disease of the Lower Extremities to make this decision. You may view this guideline at www.carelon.com/mbm-guidelines-cardiovascular.

Figure 3. A request for urgent peripheral angiography to assess and treat worsening left lower extremity ischemia was denied by insurance.



Figures 4-5. Worsening status over 3 months.



Figure 7. Pedal arch branch vessel angioplasty to improve microcirculation.

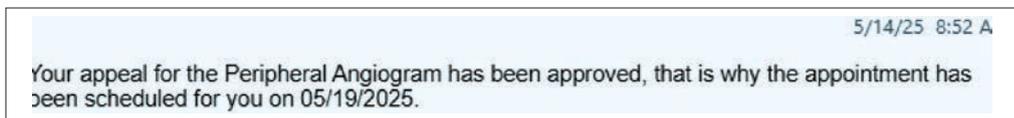


Figure 6. Insurance approval after 4 months.

disease in the popliteal artery (Video 1).
 • Critical, diffuse disease in the anterior tibial artery and total occlusions of the tibioperoneal trunk, peroneal, and posterior tibial arteries (Video 2).

Intervention included:

- Laser atherectomy of the below-knee vessels.
- Pedal arch branch vessel angioplasty to improve microcirculation (Figure 7).
- Shockwave intravascular lithotripsy (IVL) with 4.0 mm and 5.0 mm balloons from the distal SFA to the anterior tibial and popliteal arteries.

- Prolonged percutaneous transluminal angioplasty (PTA) of the involved vessels, and drug-coated balloon angioplasty (DCB) in proximal anterior tibial and popliteal arteries (Videos 3-5).

Despite the complexity and prolonged delay, the patient tolerated the procedure well, and early signs of wound healing were observed within three weeks post intervention (Figures 8-9).

Discussion

The primary goal in managing CLTI is limb preservation, achieved through rapid wound healing and avoidance of infection or necrosis. Procedural success should not be measured solely by patency rates but by clinical outcomes, including avoidance of amputation, preservation of function, and survival.

Treating CLTI should be considered as urgent as treating ST-elevation myocardial infarction (STEMI). For CLTI, however, “door-to-balloon time” is measured in weeks, not months, so why the insurance barriers?

Key points:

1. Revascularization in CLTI saves limbs and lives, and should not be delayed.
2. Timely intervention is critical to achieving optimal outcomes.
3. Procedure planning must remain in the hands of clinicians, not insurers or non-clinical administrators.
4. The selection of tools (e.g., atherectomy, DCB, IVL) must be based on clinical need and operator expertise, not insurance limitations.
5. Administrative burdens and repeated justifications consume valuable clinical time and risk burnout among vascular specialists.
6. Insurance companies should be held accountable for delays that lead to preventable amputations.
7. Physicians should be compensated for the non-clinical time spent fighting for necessary patient care.



Figures 8-9. Early signs of wound healing were observed within three weeks post intervention.

COMMENTARY

Who Owns the Limb? Ethical Boundaries of Insurance Control Over Medical Decisions

Anamika Fnu, MD; Sakshi Dixit, MD; Anmol Multani, MD; Akiva Rosenzweig, MD; Aravinda Nanjundappa, MD

Peripheral artery disease (PAD) is a chronic atherosclerotic occlusive disorder of the lower extremity arteries and affects more than 200 million individuals worldwide.¹ Chronic limb-threatening ischemia (CLTI) represents the end stage of peripheral artery disease and is characterized by ischemic rest pain and/or tissue loss.² If left untreated, CLTI

is associated with an estimated 25% risk of limb loss within one year.³ All patients with suspected or confirmed CLTI should receive optimal medical therapy and be urgently referred to a vascular specialist.³ Lower-extremity arterial revascularization is essential to prevent major above-ankle amputation in patients with CLTI and is achieved through

Insurance plays a huge part in the prognosis of peripheral artery disease patients, including the risk of amputation.

two primary approaches: endovascular therapy and open surgical bypass.⁴ The 2019 Global Vascular Guidelines recommend patient-centered infrainguinal revascularization for CLTI using the PLAN framework (Patient risk, Limb stage, Anatomic pattern).³ The BEST-CLI trial demonstrated that in CLTI patients with an adequate great saphenous vein for surgical revascularization, the incidence of major

(“Wound to Amputation”, continued from previous page)

Conclusion

CLTI affects over 6.5 million Americans, with below-knee arterial disease being the culprit in approximately two-thirds of cases. Without appropriate and timely revascularization, up to 25% of patients die within one year, and 50% within five years.⁴⁻⁶

Insurance approval for the procedure required nearly five months and multiple communications with the insurer.

While wound care and medical management are critical, revascularization, especially of both large and small vessels, is the cornerstone of limb salvage. Tools like atherectomy, prolonged PTA, DCB, and pedal arch angioplasty enhance luminal gain, improve microvascular flow, and promote durable healing.^{7,8}

Insurance-driven delays jeopardize outcomes and burden the healthcare system. This case demonstrates that when care is dictated by non-clinical policies, salvageable limbs and lives are put at risk. ■

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VIDEOS 1-5 can be found with the case report by Kumar et al online.



Ivana Dilip Kumar, Research Associate¹; Anshita Kumari, MBBS²; Kusum Lata, MD, FACC, FSCAI³

¹Research Associate, Sutter Health, Tracy, California (Under Sutter Health Modesto, California); ²Quarry Lane School, Dublin, California; ³Kasturba Medical College, Manipal, India; Research Associate, Sutter Health Tracy, California (Under Sutter Health Modesto, California); ³Interventional Cardiology; Board of Trustees, SCAI; Sutter Health, Tracy, California (Under Sutter Health Modesto, California)

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The authors can be contacted at:

*Ivana Dilip Kumar, ivana.dkumar@gmail.com
Anshita Kumari, MBBS, anshitakumari0@gmail.com
Kusum Lata, MD, FACC, FSCAI, lata.drkusum@gmail.com*

adverse limb events or death was significantly lower in the surgical group compared with the endovascular group.⁵ Despite evidence from clinical trials and guidelines supporting revascularization, insurance denials can result in adverse patient outcomes.

Insurance plays a huge part in the prognosis of PAD patients, including the risk of amputation. Previous studies have shown that interruption of insurance coverage in PAD patients with existing commercial health insurance is associated with an increased risk of lower-extremity amputation.⁶ Lower median household income, Medicaid coverage, and lack of insurance are linked to a higher risk of amputation and a lower likelihood of receiving limb-salvage revascularization.⁶ Denial of insurance coverage for a patient's angiogram or revascularization can worsen outcomes. Non-evidence-based and ambiguous insurance policies can delay access to critical, limb-saving interventions.

Although insurance policies aim to follow

Insurance challenges affect not only patients but also physicians, who face increased administrative burdens, including repeated authorizations and documentation requirements, consuming valuable clinical time, reducing patient-facing care, and contributing to burnout among vascular specialists.

guidelines, failure to incorporate recent guideline updates, new clinical evidence, and comprehensive patient-centered evaluations can harm patient health. Each patient's presentation is unique, and treatment decisions must be individualized, rather than strictly guided by aggregated study results. Multidisciplinary evaluation and individualized clinical judgment should be prioritized over blanket coverage decisions. When a patient's symptoms fail to improve with conservative management, this is a clear clinical indicator that must be taken seriously by insurance providers. Decisions made solely from chart reviews or remote assessments cannot capture the full clinical context, including patient-specific

factors, comorbidities, and urgency. Every week of delay in CLTI risks a limb, yet insurance policies treat it like routine care, not an emergency. Despite the fact that authorization rests with the insurance company, physicians can provide peer-to-peer advocacy or detailed clinical justifications for imaging or revascularization procedures to minimize delays or prevent denials. Comprehensive documentation is critical, serving both as a detailed account of the patient's condition and as an advocacy tool to prevent unnecessary delays or denials of care.

Amputation, being permanent, has profound physical and emotional consequences, and should never be approached lightly. Beyond the physical consequences, amputation causes profound emotional distress and can compromise a patient's sense of dignity and independence. Beyond limb salvage, patient-reported outcomes, including pain, mobility, and quality of life, are adversely affected by delays.

Insurance challenges affect not only patients but also physicians, who face increased administrative burdens, including repeated authorizations and documentation requirements, consuming valuable clinical time, reducing patient-facing care, and contributing to burnout among vascular specialists. Over time, this strain can diminish clinical efficiency, impair decision-making, and even affect the quality of patient care. These obstacles may erode patient-physician trust and create tension or frustration during office visits. Studies have shown that administrative tasks occupy approximately one-sixth of U.S. physicians' working hours and significantly reduce career satisfaction.⁸ It also affects the U.S. healthcare system and economy by creating inefficiencies and increasing costs.

Every patient deserves access to interventions that maximize limb salvage and minimize disability. Delays in authorization for revascularization in CLTI are more than bureaucratic hurdles — they are preventable contributors to

limb loss. Clinicians, not insurers, should guide procedure planning, selecting tools based on patient need and expertise. Aligning insurance processes with contemporary evidence and patient-centered care is essential to protect patients' limbs, health, and dignity. ■

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**Anamika Fnu, MD; Sakshi Dixit, MD;
Anmol Multani, MD; Akiva Rosenzweig,
MD; Aravinda Nanjundappa, MD**
Cleveland Clinic, Cleveland, Ohio

The authors can be contacted via Akiva Rosenzweig,
MD, at rosenza@ccf.org.