SUPPLEMENT TO

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The **Pounce™ Thrombectomy Platform** and **Pounce™ Venous Thrombectomy System** expand the vascular reach of mechanical thrombectomy


Kevin T. Onofrey, MD


Ryan Rimer, MD


Peter A. Soukas, MD


Hady T. Lichaa, MD


Abdullah Rifai, MD


McCall Walker, MD


Xavier S. Mohammed, MD

POUNCE Venous Thrombectomy

SURMODICS

Pounce Thrombectomy

Sponsored by SURMODICS

Surmodics™ Pounce™ Thrombectomy Platform

INTENDED USE
The Pounce™ Thrombectomy System is intended for the non-surgical removal of thrombi and emboli from the peripheral arterial vasculature.

CONTRAINDICATIONS
The device is contraindicated for use in patients who cannot receive recommended intravenous anticoagulant therapy.

Surmodics™ Pounce™ Venous Thrombectomy System

INTENDED USE
The intended use of the Pounce Venous Thrombectomy System is mechanical de-clotting and controlled and selective infusion of physician specified fluids, including thrombolytics, in the peripheral vasculature.

CONTRAINDICATIONS
Pounce Venous Thrombectomy System is contraindicated in the following: patients contraindicated for endovascular procedures, patients who cannot tolerate contrast media, patients in whom the lesion cannot be accessed with the guide wire, and veins less than 6mm diameter.

Surmodics™ Pounce™ Sheath

INDICATIONS FOR USE
The Pounce™ Sheath is intended to introduce therapeutic or diagnostic devices into the vasculature.

CONTRAINDICATIONS
The Pounce™ Sheath is contraindicated for coronary and neurovascular use.

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An Entirely New Capability: The Pounce™ Thrombectomy Platform for Thromboembolism Removal in Peripheral Arteries

A conversation with Dr. Kevin T. Onofrey.

Kevin T. Onofrey, MD, is a board-certified vascular and general surgeon affiliated with Henry Ford Health in Detroit, Michigan, where he serves as a senior vascular surgeon and Director of Vascular Access. He has authored and coauthored numerous publications in peer-reviewed journals on popliteal artery aneurysm, thoracic endovascular aortic repair, pedal bypass surgery, and other topics. We spoke with Dr. Onofrey about his experience in using the Pounce™ Thrombectomy Platform (Surmodics, Inc.).

Why did you begin using the Pounce™ Thrombectomy Platform?

The Pounce™ Platform addressed an important gap in our endovascular treatment algorithm for limb ischemia by reliably removing subacute and chronic thrombus or embolus in vessels as small as 2 mm in diameter in a single session, without use of thrombolytics. In doing so, it introduced an entirely new capability to our practice.

We previously tried saline-jet and aspiration technologies but found them to be of limited value for many limb ischemia cases. It's not uncommon for us to see patients with subacute or even chronic presentations, at which point their thrombus may have become fibrotic, collagenized, and wall-adherent, which can make the thrombus very difficult to aspirate. There is also the issue of blood loss with aspiration.[1] The Pounce™ Platform provides a fully mechanical, nonaspiration approach that effectively removes this organized material.

The Pounce™ Platform covers a broad range of vessel sizes (Figure 1). This allows us to deploy the Pounce™ Platform throughout the lower extremity, including in small distal vessels. The most transformative device for us has been the Pounce™ Low-Profile (LP) Thrombectomy System (Surmodics, Inc.), which can be used throughout the tibial and even pedal arteries for planned interventions or distal embolization events. In my very first use of this device, we were able to remove emboli from the distal peroneal artery and restore inline flow to the foot for a patient who had been advised to undergo below-the-knee amputation.[2]

> "The Pounce™ Platform addressed an important gap in our endovascular treatment algorithm for limb ischemia."

How have you tried to remove distal emboli in the past?

Before the Pounce™ LP System, I primarily attempted saline jet thrombectomy devices combined with chemical thrombolysis and, as salvage, hybrid over-the-wire Fogarty catheters as my option for distal embolization. However, advancing either of these modalities far enough into the pedal arteries to fully remove clot was challenging and sometimes impossible. When I could not fully remove these emboli, I resorted to thrombolysis—often requiring up to 72 hours of treatment without guaranteed durable outcomes. The Pounce™ LP System can be delivered deep into the pedal tree and arch to retrieve emboli. This capability transformed our treatment algorithm, allowing us to remove emboli mechanically and avoid thrombolytics.

What do you prefer about the Pounce™ Platform compared with the Artix™ Thrombectomy System (Inari Medical)?

The Pounce™ Thrombectomy Platform can be used in a broader range of vessel diameters and has longer working lengths (Table 1).[3] This allows me to deliver a device where I need to for the vast majority of my patients. If I can cross an occlusion with a wire, I'm confident I can deliver a Pounce™ Platform for treatment.

I also appreciate the ability to use the Pounce™ Platform with the conventional 7 Fr guiding sheath I'm accustomed to instead of a dedicated 8 Fr sheath. The sheath I use is easy to deliver and features the detachable valve options that I prefer.

Finally, I appreciate the Pounce™ Platform dual-basket design, with two similarly sized nitinol baskets positioned at different clock

TABLE 1. INDICATED VESSEL DIAMETERS AND WORKING LENGTHS FOR THE POUNCE™ THROMBECTOMY PLATFORM AND THE ARTIX™ THROMBECTOMY SYSTEM[3]

	Vessel Diameters	Working Lengths
Pounce™ XL System	5.5-10 mm	135 cm
Pounce™ System	3.5-6 mm	135 cm
Pounce™ LP System	2-4 mm	150 cm
Artix™ System (MT6)	3-6 mm	130 cm
Artix™ System (MT8)	4-8 mm	130 cm

orientations along the wire to create a dense mesh pattern for clot capture (Figure 1).

All of my partners have now adopted the Pounce™ Platform into their practice. The trainees ask us why these devices weren't available sooner. It seems like a no-brainer to them, and they advocate for their use with other practitioners.

Is there any way to improve the Pounce™ Platform?

The Pounce™ Platform is currently a fixed-wire design, where the baskets are mounted on a core wire that is substituted for the procedural guidewire. In my experience, if you're able to cross a clot with your wire easily at the start of the procedure, the fixed-wire design is not an issue. If the initial wire crossing is difficult, I would be concerned about losing wire access; however, these situations are often unsuited for mechanical thrombectomy in the first place. For example, if you have a chronic total occlusion with a hibernating clot in the middle, you shouldn't expect a mechanical thrombectomy device to replace an atherectomy device and remove the atheroma stenosing the vessel. The tool isn't intended for that purpose.

Are there situations in which the fixed-wire design of the Pounce™ Thrombectomy Platform may be advantageous?

The Pounce™ Platform allows you to perform angioplasty with .035 percutaneous transluminal angioplasty (PTA) catheters over the basket wire without having to substitute a guidewire. This can be very useful. For example, a patient with history of repaired popliteal artery aneurysm presented to us with an occluded interposition vein graft, with thrombus extending into the femoral artery. I treated the thrombus using the Pounce™ Thrombectomy System (Surmodics, Inc.) with a standard "Pac-Man" technique,

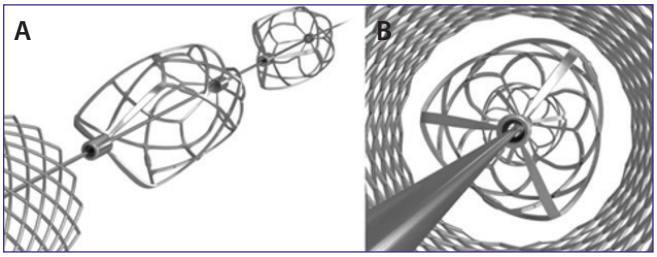


Figure 1. Lateral (A) and axial (B) view of Pounce™ Thrombectomy System showing offset basket and dense mesh pattern for clot capture.

working proximally to remove clot in pieces with small passes until reaching the thrombus cap at the graft. Without removing the Pounce™ basket wire, I was then able to advance a PTA balloon catheter over the basket wire to dilate the diseased segment within the graft. This streamlined the procedure and allowed for rapid treatment of the underlying disease without the added step of swapping in a procedural wire.

You mentioned use of the Pounce™ Platform in the upper extremity. Could you expand on this capability?

The small size of the Pounce™ LP System lends itself to upper extremity thrombectomy (see page 5). I've also found that the large size of the Pounce™ XL System (indicated for 5.5-10 mm vessels) (Surmodics, Inc.) provides distinct advantages for treating subclavian artery disease, especially right at the origin near the aortic arch. When I'm using the "Pac-Man" technique and clearing clot in the proximal vessel, the funnel catheter can be positioned to capture clot that might otherwise travel into branches distal to the clot, such as the vertebral artery. The same can be said when using the Pounce™ Platform for treating larger iliofemoral lesions, where the funnel catheter can be deployed to help prevent clot from entering the profunda artery, and for treating tibioperoneal trunk lesions, where the funnel catheter can be deployed to prevent clot from entering the tibial artery. ■

1. Maldonado TS, Powell A, Wendorff H, et al. Safety and efficacy of mechanical aspiration thrombectomy for patients with acute lower extremity ischemia. *J Vasc Surg*. 2024;79:584–592. doi: 10.1016/j.jvs.2023.10.062
2. Chamseddine H, Halabi M, Shepard A, Kabbani L, Onofrey K. Limb salvage using Pounce LP mechanical thrombectomy system after failed open and percutaneous thromboembolectomy. *J Vasc Surg Cases Innov Tech*. 2025;11:101935. doi: 10.1016/j.jvscit.2025.101935
3. Inari Medical. Artix Spec Sheet. Accessed December 12, 2025. https://www.inarimedical.com/artix-system

Kevin T. Onofrey, MD
Vascular Surgeon
Henry Ford Health
Detroit, Michigan
Disclosures: Consultant to Surmodics.

CASE REPORT

Upper Extremity Thrombus Removal Using the Pounce™ LP Thrombectomy System

By Kevin T. Onofrey, MD

PATIENT PRESENTATION AND DIAGNOSTIC FINDINGS

A female patient in her 70s with a history of atrial fibrillation, hyperlipidemia, prior deep vein thrombosis, diabetes mellitus, breast cancer treated with chemoradiation, and chronic venous insufficiency presented with ST-segment elevation myocardial infarction and acute heart failure. After percutaneous coronary intervention, an expanding hematoma developed at the left common femoral artery access site. Balloon-assisted hemostasis from the left radial artery access failed. Following an unsuccessful attempt to deliver a covered stent from the radial access site, a covered stent was successfully deployed via an 8 Fr sheath from superficial femoral artery (SFA) access to achieve hemostasis. The initial covered stent system became lodged in the radial artery, necessitating a longitudinal incision to ligate and explant the stent and remove the delivery system. Upon completion, absent pulses and Doppler signals were evident proximal to the brachial artery, and angiography confirmed thrombus in the brachial artery (Figure 1A).

TREATMENT

The left subclavian, axillary, and brachial arteries were cannulated via the left SFA sheath. The sheath was exchanged for a long, 8 Fr sheath, and the lesion was crossed with a soft .035 Glidewire® Guidewire (Terumo Interventional Systems) and NaviCross® Support Catheter (Terumo Interventional Systems). The guidewire was exchanged for a V-18™ Guidewire (Boston Scientific Corporation) to introduce the Pounce™ Low-Profile (LP) Thrombectomy System (Surmodics, Inc.). Two passes with the Pounce™ LP System (20-minute device time) restored flow and salvaged the hand without deficit (Figure 1B and 1C). The left SFA sheath was removed, and an Angio-Seal® VIP Vascular Closure Device (Terumo Interventional Systems) was used for hemostasis.

POSTPROCEDURE OUTCOMES AND PHYSICIAN OBSERVATIONS

The Pounce™ LP Thrombectomy System provided a rapid solution to upper extremity thrombus in a patient with hemodynamic instability secondary to prior cardiac interventions. Its use enabled limb salvage with only 20 minutes of device time. ■

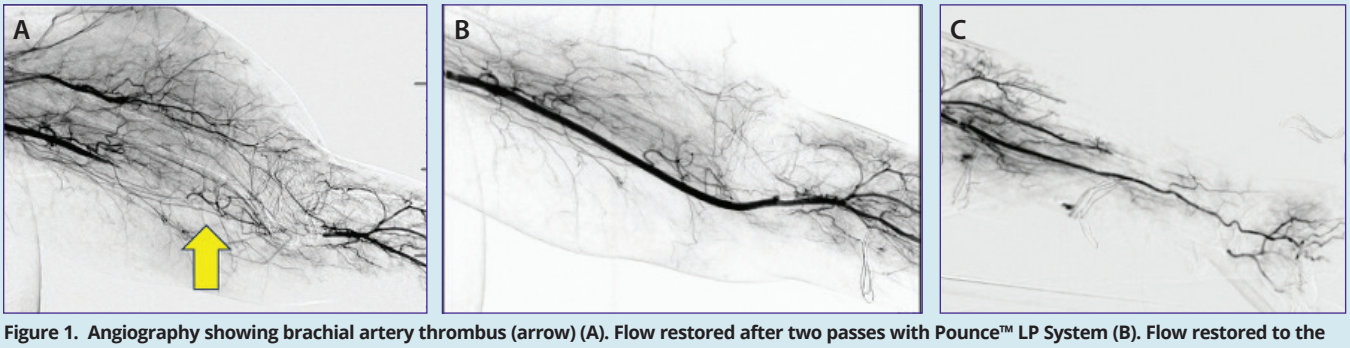


Figure 1. Angiography showing brachial artery thrombus (arrow) (A). Flow restored after two passes with Pounce™ LP System (B). Flow restored to the hand (C).

Pounce™ Thrombectomy Platform: Physician-Designed for Simplicity and Effectiveness

By Gary Ansel, MD, and Chad Stark

Acute limb ischemia (ALI) is associated with 30-day amputation rates as high as 30%.[1] Prompt revascularization is essential for limb salvage, and the history of ALI treatment is marked by innovations that have reduced time to limb perfusion. No such innovation changed the course of treatment more than the Fogarty balloon catheter, which inspired the development of the endovascular Pounce™ Thrombectomy Platform (Surmodics, Inc.).

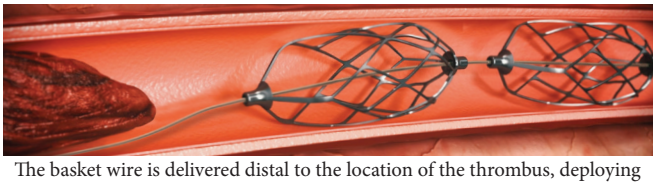
As the inventors and developers of the Pounce™ Platform, our vision was to create a simple-to-use percutaneous device—one that did not require capital equipment or use of thrombolytics—modeled on the Fogarty catheter's mode of action, with basket deployment distal to thrombus and withdrawal back. The driving need was to make it easier for more physicians, across specialty lines, to remove arterial emboli and thrombi right on the angiographic table through their preferred sheaths, without transferring patients to tertiary care centers. In an era of understaffed, overburdened health care systems, simplicity of use would be critical.

AMBITIOUS GOALS

The original design specifications for the Pounce™ Thrombectomy Platform*, which date to 2008, called for use of wall-apposed, clot-engagement baskets effective at removing organized thrombi and emboli without aspiration and its associated blood loss. The device had to be atraumatic to the vessel wall and capture clot engaged by the baskets into a proximal enveloping funnel with low risk of distal embolization while removing the clot-burdened system through a conventional access sheath. It had to be long enough for the baskets to reach below-the-knee arteries within its indicated diameter range from contralateral access, and be compatible with 035 PTA balloon catheters, which could be introduced over the basket wire to aid with clot disruption. These attributes are realized in today's Pounce™ Platform (Figure 1).

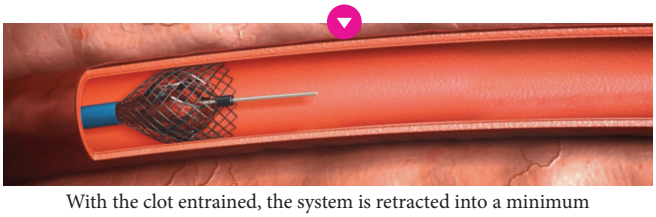
The question arises how a simple, readily deployable device could meet these ambitious design goals. The answer lies in dedicated effort spanning several years of rapid prototyping, continual design improvements, and ongoing physician feedback.

> "The driving need was to make it easier for more physicians, across specialty lines, to remove arterial emboli and thrombi right on the angiographic table."



The basket wire is delivered distal to the location of the thrombus, deploying two nitinol self-expanding baskets.

The baskets capture the clot and are retracted into a nitinol collection funnel.



With the clot entrained, the system is retracted into a minimum 7 Fr guide sheath and removed from the body.

Figure 1. Pounce™ Platform mode of action.

EFFICIENT CLOT CAPTURE WITH LOW RISK OF EMBOLIZATION

In terms of clot capture, a central principle of the Pounce™ Platform is to have a two-basket design in which the baskets are spaced longitudinally and rotationally offset against each other. The baskets are welded to the basket wire only on their proximal ends; this allows their distal ends to remain "floating" on the wire. The longitudinal spacing between baskets allows the distal basket to pick up clot that the proximal basket may have missed. Importantly, the rotational offset of these self-expanding nitinol baskets creates a dense mesh pattern for clot capture (see Figure 1, page 4). The

use of two baskets instead of one, the cell design of the baskets, and the spacing between the baskets are the result of testing on multiple design prototypes. For benchtop testing of design iterations, considerable scientific and engineering diligence went into the development of a range of physician-vetted, blood-derived acute, subacute, and chronic clot morphologies meant to represent clinical conditions.

This basket design works in tandem with the Pounce™ Platform's 6.5 cm double-layer, nitinol wire-braided funnel, which encloses the baskets and their thromboembolic load before retraction into the procedural access sheath. As the baskets begin to enter the sheath and collapse, their grip on the entrained clot tightens—an effect somewhat similar to a Chinese finger trap. The pressure within this mesh pattern compresses and dehydrates the clot, facilitating clot removal through a standard 7 Fr sheath of the operator's choosing.

The speed and efficiency of this proprietary basket-funnel mechanism is supported by emerging data from the Pounce™ Platform PROWL registry. In a January 2025 interim analysis[2] of 74 patients with native infrainguinal vessel limb ischemia in this all-comers registry, the median number of system passes was 2.5 (N = 56), while the average Pounce™ thrombectomy use time was 20.3 minutes. There were no reports of device-related distal embolization.[†]

VISUALIZATION

Good fluoroscopic visibility was another specification for the Pounce™ Platform at the concept stage and remains a notable feature. In addition to the radiopaque spring-coil tip on the basket wire, the baskets themselves are dotted with radiopaque markers. This allows operators to visualize the longitudinal span and wall apposition of the baskets as they move through the vessel. The funnel catheter has a marker at the distal tip, and the deployed funnel component is also radiopaque for confirmation and clarity of funnel placement.

CLOT REMOVAL THROUGHOUT THE LOWER AND UPPER EXTREMITIES

Since the 2021 introduction of the Pounce™ Thrombectomy System, intended for use in 3.5–6 mm peripheral arteries, Surmodics has expanded the vessel diameter range for the Pounce™ Platform with the addition of the Pounce™ LP (Low–Profile) and Pounce™ XL Thrombectomy Systems (Surmodics, Inc.), intended for 2–4 mm and 5.5–10 mm peripheral arteries, respectively. These progressive product iterations fulfill our intention of providing a standalone solution for rapid removal of peripheral arterial thrombi and emboli throughout the lower and upper extremities. Notably, the Pounce™ LP System provides a solution for rapid removal of emboli and thrombi in distal tibial arteries, long a major concern for interventionalists,[3] or in like-sized peripheral arterial vessels.

For additional PROWL results, scan the QR code

The growing use of the Pounce™ Platform, as well as data emerging from the PROWL registry, suggest we were on the right track in 2008. In the aforementioned interim analysis,[2] 79.7% of patients received no additional clot removal treatment of the target lesion after Pounce™ Platform use; device-related adverse events were limited to one flow-limiting dissection.[‡] Four in 10 (40.5%) PROWL patients had experienced symptoms for >14 days, suggesting a complex population with a wide range of clot chronicity. Of the clots removed, 73.6% were thrombotic and 24.4% were embolic. As of today, the registry continues to enroll patients in centers across the US.

The original goals for the Pounce™ Platform were driven by clinical need and realized through diligent engineering. The result is a groundbreaking solution for flow restoration in ALI—one that seamlessly integrates into physician workflows, prioritizes user-friendliness, and offers a cost-effective approach to treatment. In today's overburdened health care landscape, inundated with novel devices, we believe these attributes are critical for driving meaningful improvements in patient care.

THE POUNCE™ THROMBECTOMY PLATFORM—KEY TAKEAWAYS

- Rapidly removes acute or chronic peripheral arterial clot—20.3 minutes average use time in PROWL[2]
- No capital equipment or thrombolytics required
- Uses no aspiration for clot removal, minimizing blood loss
- Associated with low risk of distal embolization[2†]
- Atraumatic—low risk of flow-limiting dissection[2‡]
- Compatible with 035 PTA balloon catheters for clot disruption and conventional ≥7 Fr access sheaths ■

1. Gupta R, Siada SS, Bronsert M, et al. *Ann Vasc Surg*. 2022;87:334-342. doi: 10.1016/j.avsg.2022.06.019
2. Lyden S. Results of novel non-aspiration mechanical arterial thrombectomy device for acute and chronic lower extremity ischemia: PROWL registry study. Presented at: the 20th annual Leipzig Interventional Course (LINC); January 29, 2025; Leipzig, Germany.
3. Marques L, Preiss M, Lehrke S, et al. *Endovasc Today*. 2014;13:71-76.

Gary Ansel, MD, inventor of the Pounce™ Thrombectomy System, is an interventional cardiologist and former system medical chief for the vascular program at OhioHealth and Assistant Clinical Professor of Medicine at the University of Toledo Medical Center. He is a consultant/on advisory board for Boston Scientific Corporation, Medtronic, Cook Medical, Surmodics, Otsuka/Veryan Medical, Reflow Medical, and Akura.

Chad Stark is senior staff engineer for vascular interventions product development at Surmodics. He reports no disclosures.

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*Then called the Ansel Trumpet Device.
†Distal embolization requiring surgical procedure or obstructing one of the major downstream vessels >70% (at the end of the procedure).
‡Device-related adverse events tracked in the registry were flow-limiting dissection, distal embolization, perforations, or major bleeding (requiring transfusion).

Removing Chronic Clot Down to—and Through—the Pedal Loop With the Pounce™ Thrombectomy Platform

A conversation with Dr. Ryan Rimer.

Interventional radiologist **Ryan Rimer, MD**, heads the interventional radiology group at the University Medical Center (UMC) of Southern Nevada in Las Vegas. Working at UMC, Nevada's only level 1 trauma center, fits Dr. Rimer's attraction to "high-intensity" environments—before attending medical school, he was a firefighter paramedic. Among the limb ischemia patients Dr. Rimer and colleagues treat at UMC, a public hospital, are uninsured individuals with neglected arterial wounds who present to the emergency room with severe rest pain. The challenge of removing mature, organized thromboembolic clots from these and other patients led him to try the fully mechanical Pounce™ Thrombectomy Platform (Surmodics, Inc.). Today, Dr. Rimer uses the Pounce™ Platform for clot removal throughout the leg and—with the Pounce™ Low Profile (LP) Thrombectomy System (Surmodics, Inc.), indicated for 2 to 4 mm peripheral arteries—down to and through the pedal loop. We spoke with Dr. Rimer about his limb ischemia practice and his experience with the Pounce™ Platform.

Could you describe your background in treating limb ischemia and your approach to patient care?

Early in my career, I began practicing in Las Cruces, New Mexico. That's where I really spread my wings in terms of endovascular treatment of peripheral artery disease (PAD), both acute limb ischemia and chronic limb-threatening ischemia (CLTI). PAD and CLTI are highly prevalent in that part of the country, and I was the lone interventional radiologist in the hospital. I was doing three or four limb cases a week—great background for learning how to treat and manage these patients. Fortunately, I was able to collaborate with a podiatrist in the hospital who was passionate about limb salvage. I developed a strong belief that if you're going to take on these cases, you need to follow patients in a clinic instead of simply treating them and sending them on their way. Following up with patients could be hard in Las Cruces, but we really tried. That's the approach I follow at UMC, and the hospital is highly supportive.

> "The Pounce™ Platform allows me to efficiently remove chronic or acute clots or retrieve distal emboli."

When did you first use the Pounce™ Platform?

In New Mexico, we had a limb ischemia patient come in with a popliteal/tibial blockage. We worked hard to open her leg, using lytics or whatever else was at hand, but nothing was working. We then tried the Pounce™ LP Thrombectomy System and were able to establish reperfusion in this patient's leg. We had at least one vessel with runoff to her foot and were able to save her limb. As my experience with the Pounce™ Platform grew, I became interested in seeing how it would perform in other situations, such as removing chronic clots to recannulate vessels in CLTI patients. I found that it worked well in a wide variety of cases.

What's different about the Pounce™ Platform?

For one thing, it's fully mechanical. In my experience, aspiration devices do not do a very good job unless the thrombus is truly acute. When I used aspiration on older thrombus, I'd often find myself dislodging clot and chasing the emboli down the leg, into the foot. The Pounce™ Platform allows me to efficiently remove chronic or acute clots or retrieve distal emboli should they occur.

Another big advantage of the Pounce™ Platform is the availability of the Pounce™ LP System for below-the-knee and pedal cases. For these cases, I wire down through either the

posterior tibial or anterior tibial artery, then move the wire through the pedal loop and retrograde back into the other tibial artery. I then deploy the Pounce™ LP System and pass the basket catheter through to clean the loop.

I've found no other thrombectomy device that lets you treat the foot like that. I've used the Pounce™ LP System in patients with literally no tibial flow. When you have patients with very complex lesions, it's almost inevitable that you're going to have thrombus or debris in the pedal loop. If you can't get that open, you may not be able to save their complete foot.

Can you describe a pedal case involving the Pounce™ LP System?

I had a patient come in with foot wounds in the dorsalis pedis (DP) angiosome with a chronic occlusion of the DP. I was able to get a wire through the occlusion. I considered standard ballooning but didn't think it would do much good long term. I also considered debulking the vessel, but there aren't great atherectomy options for removing clots in the foot. Ultimately, I put the Pounce™ LP System through that occlusion and was able to recannulate the DP artery.

Physicians have used the Pounce™ Platform to capture distal emboli dislodged during planned procedures to treat other upstream vessels.[1] Have you also done this?

I've had a few cases like that. I had one outpatient case involving a patient with CLTI and rest pain. While I was working on opening a short-segment occlusion in his popliteal artery, I embolized to his foot. I used the Pounce™ LP System to clean that up. When I finished clearing his foot, he had three-vessel runoff.

> **"I've used the Pounce™ LP System in patients with literally no tibial flow."**

It does give you a little more assurance knowing that when you treat these chronic patients, you have a device sized to allow you to reach deeper leg arteries or the foot to clean up any embolization. I've had this discussion with my colleagues many times. I feel I can be a little more aggressive in these cases knowing that if I embolize, I have the Pounce™ Platform as backup. ■

1. Leville C. Cutting down on cutdowns with the Pounce™ LP Thrombectomy System. *Endovasc Today*. 2024;23 (suppl 5):12-13. https://evtoday.com/articles/2024-may-supplement/cutting-down-on-cutdowns-with-the-pounce-lp-thrombectomy-system

Ryan Rimer, MD
Interventional Radiologist
University Medical Center of Southern Nevada
Las Vegas, Nevada
Disclosures: None.

CASE REPORT

Treating Common Femoral and Popliteal Artery Occlusions With the Pounce™ Thrombectomy System

By Peter A. Soukas, MD

PATIENT PRESENTATION AND DIAGNOSTIC FINDINGS

A man in his late 70s with a history of atrial fibrillation, type 2 diabetes mellitus, high blood pressure, heart failure with preserved ejection fraction, and aortic insufficiency stopped his warfarin for 5 days in anticipation of right knee steroid injection. The patient developed abrupt onset of right foot pain and numbness. On presentation, he was found to have cool foot with intact motor function and mildly diminished sensation of the toes. CTA showed thrombotic occlusion of the right common femoral artery (CFA). The patient was emergently referred for angiography and intervention for acute limb ischemia (ALI).

TREATMENT

Angiography confirmed right CFA thrombotic occlusion (Figure 1A). Two passes were performed with the Pounce™ Thrombectomy System (Surmodics, Inc.) in the right CFA to remove the clot and restore flow (Figure 1B). Angiography following CFA flow restoration revealed another thrombotic occlusion in the proximal popliteal artery (Figure 2A). With the baskets deployed in the distal popliteal artery and the funnel deployed in the superficial femoral artery (SFA), three passes removed organized clot, likely of cardiac emboli origin, which restored flow to the anterior tibial (AT) artery (Figure 2B) and resolved sensory deficits. Catheter-directed thrombolysis (CDT) was used overnight in the tibioperoneal trunk. Final angiograms showed restoration of three-vessel runoff (Figure 3), with all patient symptoms resolved.

POSTPROCEDURE OUTCOMES AND PHYSICIAN OBSERVATIONS

The patient was discharged with prescribed apixaban replacing warfarin. The Pounce™ Thrombectomy System allowed for quick and efficient treatment of ALI in the CFA and AT artery, restoring flow and resolving sensory deficits. The fully mechanical Pounce™ System allowed us to avoid the blood loss associated with aspiration thrombectomy and enabled removal of suspected cardiac emboli, which are notorious for being organized. Only 10 mg tissue plasminogen activator was required to lyse the small thrombus burden below the knee, minimizing the risk of bleeding complications. ■

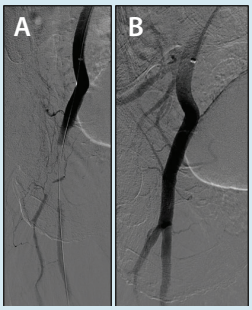


Figure 1. Angiogram showing right CFA thrombotic occlusion (A), with restored flow after two passes of the Pounce™ Thrombectomy System (B).

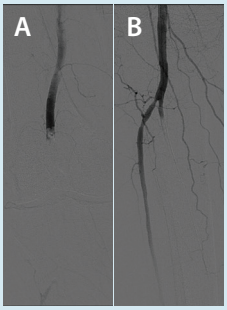


Figure 2. Angiography showing thrombotic occlusion in the proximal popliteal artery (A). Restored flow to AT artery after three passes with the Pounce™ Thrombectomy System (B).

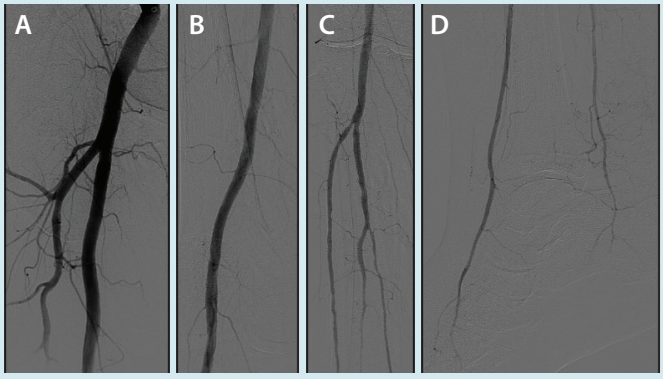


Figure 3. Final angiograms showing restored flow in the CFA (A), SFA and popliteal artery (B), as well as tibial runoff (C) down to the foot (D).

Peter A. Soukas, MD
Interventional Cardiologist
Director, Vascular & Endovascular Medicine & Interventional PV Laboratory
Director, Brown Vascular & Endovascular Medicine Fellowship
The Miriam & Rhode Island Hospitals
Associate Professor of Medicine
The Warren Alpert Medical School of Brown University
Providence, Rhode Island
Disclosures: Receives research support from Amplitude Vascular Systems, BD, Boston Scientific, Contego Medical, Cordis, Endologix, Inquis Medical, InspireMD, National Institutes of Health, Penumbra, Philips, R3 Vascular, Reva Medical, Shockwave Medical, and Gore & Associates; consultant to Boston Scientific, Contego Medical, Cordis, Endologix, Shockwave Medical, and Gore & Associates.

CASE REPORT

Removing Organized Femoral Clot With the Pounce™ XL Thrombectomy System

By Hady T. Lichaa, MD, FACC, FSCAI, FSVM, RPVI

PATIENT PRESENTATION

A man in his mid-80s with chronic obstructive pulmonary disease and a former smoker had undergone an open thrombectomy for left lower extremity (LLE) acute limb ischemia (ALI) several months earlier. Since then, he was readmitted for another episode of ALI while taking apixaban and was treated with aspiration thrombectomy, achieving limited clot removal but restoring some outflow in the distal superficial femoral artery (SFA) and popliteal artery with the help of percutaneous transluminal angioplasty. He subsequently developed a left groin abscess from the initial surgery and was readmitted for incision and drainage. A few weeks after this procedure, he presented again with recurrent LLE ALI despite taking apixaban and clopidogrel.

DIAGNOSTIC FINDINGS

Initial angiography conducted via contralateral groin access revealed organized clot in the proximal SFA (Figure 1A), calcification with reduced flow in the distal SFA and popliteal artery (Figure 1B), and minimal tibial runoff (Figure 1C).

TREATMENT

The Pounce™ XL Thrombectomy System (Surmodics, Inc.) was introduced through a 7 Fr sheath, with the baskets deployed in the mid-SFA and the funnel deployed in the external iliac artery. Two passes with the Pounce™ XL System removed significant subacute thrombus (Figure 2A) and restored flow into the SFA and popliteal artery (Figure 2B). Next, angioplasty was performed in the proximal anterior tibial (AT) artery to treat the outflow disease, followed by deployment of a long drug-coated balloon (DCB) in the mid-to-distal SFA and intravascular lithotripsy (IVL) in the common femoral artery. Final angiography showed restored flow in the femoral and popliteal arteries (Figure 3).

POSTPROCEDURE OUTCOMES

Due to the history of rethrombosis on apixaban, the patient was bridged with enoxaparin, warfarin, and clopidogrel with a target international normalized ratio of 2 to 2.5 without aspirin to minimize bleeding risk. The patient had no recurrent events at 3-month follow-up. The Pounce™ XL Thrombectomy System enabled fast and efficient removal of subacute organized clot in a patient with a complex treatment history. ■

Hady T. Lichaa, MD, FACC, FSCAI, FSVM, RPVI
Interventional Cardiologist
Associate Professor of Medicine, University of Tennessee Nashville
Ascension Saint Thomas Heart
Nashville, Tennessee
Disclosures: Consultant to Abbott Vascular, Cordis, Johnson & Johnson, Philips, Penumbra, and Surmodics.

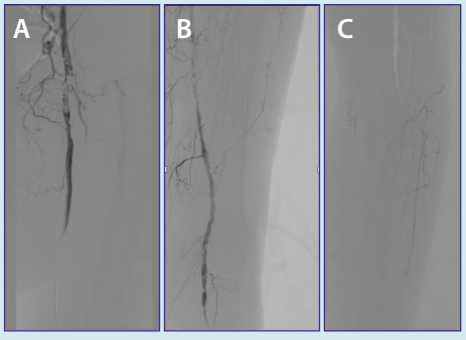


Figure 1. Initial angiography showing organized thrombus in the proximal SFA (A), with compromised flow in the distal SFA and popliteal artery (B) and minimal tibial runoff (C).

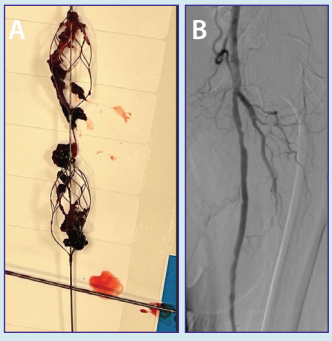


Figure 2. Subacute SFA thrombus removed with the Pounce™ XL System (A). Restoration of flow into the SFA and popliteal arteries with two passes of the Pounce™ XL System (B).

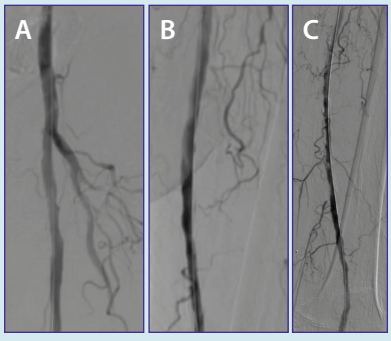


Figure 3. Final angiography showing restoration of flow to promixal SFA (A), mid-SFA (B), and distal SFA/popliteal artery (C) following Pounce™ XL System thrombectomy, angioplasty, DCB treatment, and IVL treatment.

Efficiency and Versatility: Revascularization of Lower Extremity Veins With the Pounce™ Venous Thrombectomy System

A conversation with Dr. Abdullah Rifai.

Interventional cardiologist **Abdullah Rifai, MD, FACC, FSCAI, RPVI**, serves as the Catheter Laboratory Director at Advocate South Suburban Hospital in Hazel Crest, Illinois. He specializes in advanced cardiovascular care, performing catheter-based treatments for complex vascular and coronary artery diseases. Dr. Rifai is actively involved in teaching interventional cardiology fellows at the University of Illinois at Chicago and holds an assistant professorship at Wake Forest University, which has academic affiliation with the Advocate Health system. We spoke with him about his approach to treating lower extremity venous thrombosis and his experience with the Pounce™ Venous Thrombectomy System (Surmodics, Inc.).

How do you manage patients who present with lower extremity thrombosis?

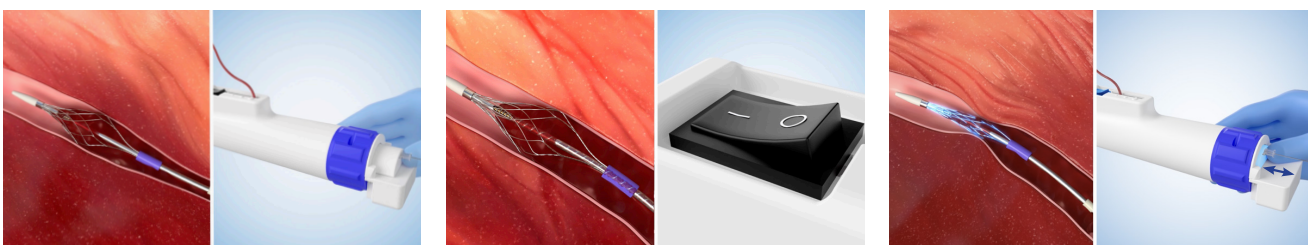
Most of these patients can be managed medically with anticoagulation, while about 30% may require intervention. Our practice mainly targets iliofemoral thrombosis for thrombus removal, but we don't limit ourselves to this region when we want to clear inflow veins or if the limb is threatened in any way.

> "The system combines the advantages I see in aspiration and mechanical thrombectomy."

Initially, our standard approach was catheter-directed thrombolysis. However, we have gradually shifted toward minimizing the use of thrombolytics to help decrease intensive care unit admissions. We began by using a combined mechanical and lytic approach with the AngioJet™ Peripheral Thrombectomy System (Boston Scientific Corporation). More recently, our practice has evolved to favor devices that can remove clot without lytics, such as either aspiration-only thrombectomy or mechanical thrombectomy using the Pounce™ Venous Thrombectomy System or the ClotTriever® System (Inari Medical), both of which have wall-apposable baskets. We rarely use lytics now.

Figure 1. Pounce™ Venous System mechanism of action.

Watch full animation



1. The basket is expanded to maintain vessel wall apposition (vessel range 6–16mm).

2. The extraction screw is activated and removes clot at the point of collection.

3. Self-adjusting basket maintains wall contact. Can be manually collapsed.

How do you select between aspiration-only or mechanical devices for a given case?

It largely depends on patient history. If I think the clot is recent and loosely formed, I tend to prefer an aspiration system. When I suspect the clot is more chronic and wall-adherent, I'm more likely to choose a mechanical device. Aspiration-only systems often struggle to remove organized, wall-adherent clot, so you can end up primarily suctioning blood as you're working to dislodge the clot. A mechanical thrombectomy device with a wall-apposable basket is better suited for the task.

Sometimes, I might begin with aspiration and find I need to switch to mechanical treatment to remove wall-adherent material. In these cases, the 10 Fr introducer compatibility of the Pounce™ Venous System can be very helpful. If I'm using a 12 Fr aspiration system, I can deliver the Pounce™ Venous System through the procedural sheath instead of removing and replacing the sheath. This saves time and procedural steps.

What other advantages do you see in the 10 Fr introducer compatibility of the Pounce™ Venous System?

It allows me to access smaller veins, even below the knee. For example, I may want to access the posterior tibial vein, or even the great saphenous vein or small saphenous vein to clean out popliteal clot and inflow. Upper extremity treatment is not part of my practice, but I know the Pounce™ Venous System can be used in those veins as well.

When are you likely to choose the Pounce™ Venous System as your front-line option for mechanical thrombectomy?

There is no set algorithm; it really depends on patient variation and my gestalt as a physician. I tend to favor the Pounce™ Venous System when its versatile and efficient design (Figure 1) is especially suitable for a case (see page 15).

By versatility, I mean more than its small profile. The system allows me to manually control the basket diameter or collapse the basket altogether. This feature is very important. Every new case presents different anatomical challenges, whether from chronically stenosed vessels, multiple small vessels due to variant venous anatomy, or May-Thurner strictures. Being able to control the basket diameter inside narrow vessels without losing grip on the clot is a strong benefit. Compared with fixed-diameter baskets, an adjustable basket diameter can also improve patient comfort when pulled through tight veins.

> "Being able to control the basket diameter inside narrow vessels without losing grip on the clot is a strong benefit."

Why do you say the Pounce™ Venous System is efficiently designed?

This system works in two ways at once. Inside the basket, a rotating Archimedes screw breaks down and continuously removes clot from the patient. At the same time, the basket separates adherent clot from the vessel wall. In this sense, the system combines the advantages I see in aspiration and mechanical thrombectomy in one device. It also allows me to infuse contrast through side ports on the catheter, which saves procedural time. Finally, the short length of the basket allows me to clean the basket between passes while it's still on the wire. In contrast, cleaning debris from the ClotTriever® System, with its lengthy collection bag, takes more time and attention.

Do you have any practical tips for new Pounce™ Venous System operators?

Pay close attention to the tactile feel of the device as you withdraw the basket through the vein and how it interacts with clot on the vessel wall. This sensory feedback helps you leverage the ability to manually narrow or fully collapse the basket to better advantage. Because the ability to manually control basket diameter is rather novel, it may take some experience to fully appreciate it at first. Overall, the system is very easy to use. ■

Abdullah Rifai, MD, FACC, FSCAI, RPVI
Interventional Cardiologist
Advocate South Suburban Hospital
Hazel Crest, Illinois
Disclosures: Consultant to Surmodics, Penumbra, and Inari Medical.

CASE REPORT

Efficient Removal of Organized Iliofemoral Venous Thrombus With the Pounce™ Venous Thrombectomy System

By Abdullah Rifai, MD, FACC, FSCAI, RPVI

PATIENT PRESENTATION

A woman in her late 60s presented with right leg swelling, heaviness, and pain of 5-week duration. She was a current smoker with a body mass index of 65 kg/m^2, thrombocytopenia, chronic obstructive pulmonary disease, and a history of distal deep vein thrombosis and anticoagulation therapy. Pulses were normal with stable vital signs. Physical examination showed right leg edema.

DIAGNOSTIC FINDINGS

With the patient in the prone position, ultrasound-guided micropuncture access to the right popliteal vein was obtained. Venography showed duplication of the right popliteal/femoral system with clot in both (Figure 1A). Confluence of the duplication occurred near the lesser trochanter. Venography showed occlusion in the medial distal common femoral vein (Figure 1B), and proximal external iliac vein (Figure 1C). Intravascular ultrasound (IVUS) showed chronic thrombosis in both vessels, with chronic thrombosis and severe compression at the right mid external iliac vein (Figure 2).

TREATMENT

The 12 Fr Pounce™ Sheath (Surmodics, Inc.) was introduced into the right popliteal vein, the funnel was deployed, and two passes were made with the Pounce™ Venous Thrombectomy System (Surmodics, Inc.) through the sheath. Angioplasty performed with a high-pressure 8 mm Conquest™ PTA Dilatation Catheter (BD) showed significant waist in the femoral vein. The Pounce™ Venous System was again deployed, removing chronic clot (Figure 3). Final venography showed restoration of iliofemoral blood flow (Figure 4). Total thrombectomy time was 25 minutes, with 100 mL blood loss.

PHYSICIAN OBSERVATIONS

The Pounce™ Venous System efficiently removed chronic thrombus in a patient with challenging venous anatomy, restoring inline flow without use of thrombolytics. ■

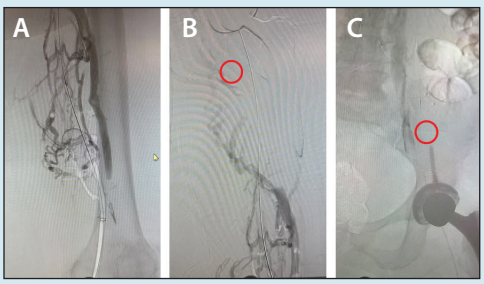


Figure 1. Venography showing duplication of the right popliteal/femoral system with clot in both (A), occlusion in the distal common femoral vein (B), and severe compression and occlusion of the proximal external iliac vein (C). Circles indicate points of IVUS imaging shown in Figure 2.

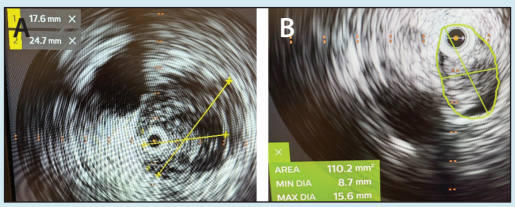


Figure 2. IVUS showing thrombosis of the right common femoral vein (A) and chronic thrombosis in the right mid external iliac vein (B).

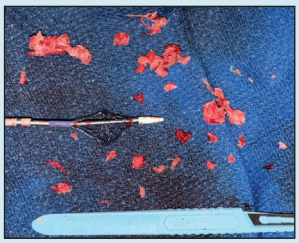


Figure 3. Chronic clot removed with the Pounce™ Venous System.

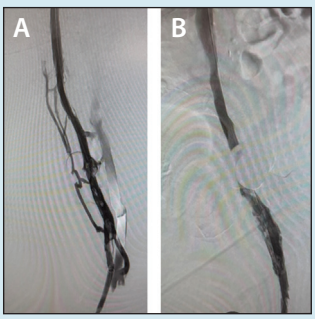


Figure 4. Final venogram showing revascularization of the right femoral vein medial to a duplicate femoral vein (A) and restored flow from femoral vein to inferior vena cava (B), with superimposed radiopaque artifact from prior hip arthroplasty.

CASE REPORT

Removal of Wall-Adherent Venous Clot With the Pounce™ Venous Thrombectomy System After Attempted Aspiration

By Abdullah Rifai, MD, FACC, FSCAI, RPVI

PATIENT PRESENTATION

A woman in her mid-80s presented with 1-week progressive left lower extremity pain and extensive swelling. She had been transferred from an outside facility for coffee-ground emesis, with esophagogastroduodenoscopy revealing severe esophagitis treated with twice-daily proton pump inhibitor initiation. Her blood pressure was 122/54 mm Hg, with stable vital signs.

DIAGNOSTIC FINDINGS

Venous duplex ultrasound of bilateral lower extremities showed thrombosis of left distal external iliac, common femoral, femoral, and posterior tibial veins, with patent popliteal and peroneal veins. With the patient in the prone position, ultrasound-guided micropuncture access to the left popliteal vein was obtained. Venography showed occlusions in the left femoral and common femoral veins (Figure 1).

TREATMENT

A 16 Fr Lightning Flash™ 2.0 Aspiration Thrombectomy System (Penumbra, Inc.) was introduced over a .035 guidewire into the left femoral vein. Aspiration succeeded in removing clot from the femoral vein, but the 16 Fr system could not be advanced through the entire femoral vein (due to narrowness) and into the common femoral to treat wall-adherent fibrotic material. Following balloon angioplasty and IVUS imaging, the Pounce™ Venous Thrombectomy System (Surmodics, Inc.) was introduced through the 16 Fr sheath into the common femoral vein and succeeded in removing chronic thrombus (Figure 2). Final venography showed restoration of flow in the common femoral vein, with proper inflow from the profunda vein (Figure 3).

PHYSICIAN OBSERVATIONS

The clinical presentation of venous clot can be complex, and the age and morphology of clots may vary significantly. The Pounce™ Venous System device is effective as a primary option for resistant clots or as a backup for aspiration thrombectomy that does not require sheath exchange. ■

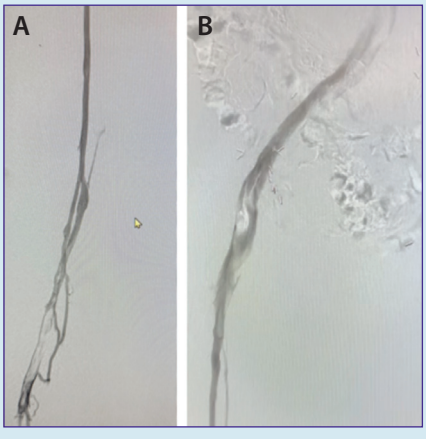


Figure 1. Initial venogram showing occluded left femoral vein (A) and common femoral vein (B).

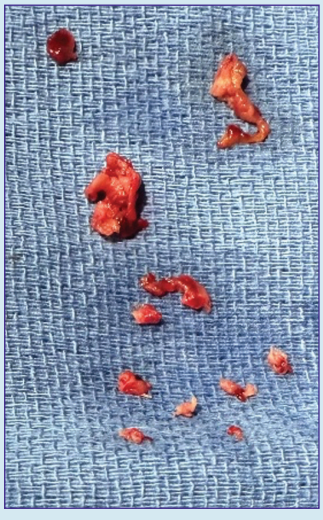


Figure 2. Chronic clot removed from the left common femoral vein with the Pounce™ Venous System.

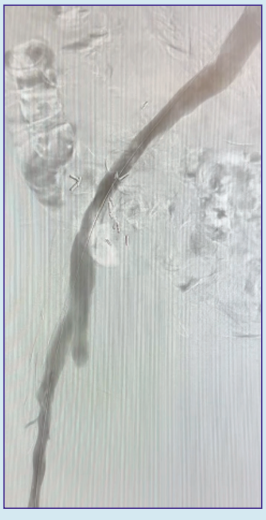


Figure 3. Venography performed after Pounce™ Venous System thrombectomy showing revascularization of left common femoral vein and an open profunda vein.

CASE REPORT

Removal of Lower Extremity Venous Thrombus Via Tibial Access With the Pounce™ Venous Thrombectomy System

By McCall Walker, MD

PATIENT PRESENTATION

A man in his mid-70s with a body mass index of 45 kg/m^2, severe chronic obstructive pulmonary disease, diabetes, and a history of total knee arthroplasty to both knees presented to the clinic in urgent referral from his primary care doctor with severe left lower extremity swelling, significantly worse than what he considered baseline. Three weeks previous, the patient underwent an arterial duplex ultrasound (DUS) exam for mild swelling as well as hyperpigmentation in both limbs, which showed disease (insufficiency) limited to the superficial veins. At that time, radiofrequency ablation to both great saphenous veins was planned after a trial of conservative therapy.

DIAGNOSTIC FINDINGS

DUS revealed thrombus extending from the left popliteal to the mid-femoral vein. Based on the patient's prior and most recent DUS exam, the clot was suspected as acute to subacute. Given significant pain, swelling, and high risk of postthrombotic syndrome, the patient was scheduled for thrombectomy after a risk/benefit discussion. He was appropriately anticoagulated. On the day of the procedure, the patient was placed in the prone position and micropuncture access was attempted under ultrasound guidance in the popliteal vein. Extreme obesity, substantial superficial tissue, and thrombus in the popliteal region rendered access technically challenging. DUS was used to locate a segment of the posterior tibial (PT) vein suitable for access and subsequent placement of a 10 Fr sheath. Venography confirmed thrombotic occlusion of the popliteal and femoral veins as well as a small section of the accessed tibial vein (Figure 1).

TREATMENT

A 10 Fr sheath was introduced into the PT access site, and percutaneous balloon venoplasty was performed in the PT vein with a 5 mm diameter balloon. The Pounce™ Venous Thrombectomy System (Surmodics, Inc.) was then introduced through the sheath, and the system basket was deployed in the femoral vein. Multiple system passes removed a substantial quantity of both acute and subacute thrombus (Figure 2), with total thrombectomy time approximately 15 minutes. Final venography showed restoration of femoral and popliteal flow (Figure 3). The patient was discharged later that day with continued therapeutic anticoagulation.

PHYSICIAN OBSERVATIONS

The small 10 Fr profile of the Pounce™ Venous System allowed us to use tibial access in a patient with substantial obesity without compromising procedure efficacy. This access site provided the added benefit of allowing thrombus clearance in the distal popliteal vein, which would normally not be possible from a standard popliteal vein access. Based on my experience with the system, I was also confident that the wall-apposed basket would be able to remove a substantial amount of subacute clot encountered in these vessels, which was indeed the case. I was able to easily clean the Pounce™ Venous System basket between passes without removing the device from the wire, which reduced procedure time and improved case efficiency. ■

Figure 1. Initial venography showing severe thrombotic disease of the popliteal and femoral veins.

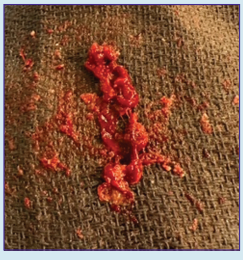


Figure 2. Acute and subacute clot removed by the Pounce™ Venous System (clot in retrieval bag not shown).

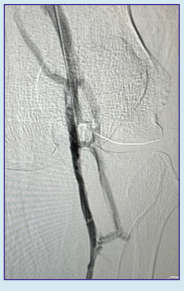


Figure 3. Final venogram showing restoration of femoral and popliteal flow (lower magnification image).

McCall Walker, MD
Interventional Cardiologist
Cardiovascular Institute of the South
Houma, Louisiana
Disclosures: None.

The 10 Fr Pounce™ Venous Thrombectomy System: Designed for Power and Operator Control

With Stephen A. Black, MD, FRCS(Ed), FEBVS; Pradeep K. Nair, MD, FACC, FSCAI; and Nachiket J. Patel, MD, FACC, FACP, FSCAI

Venous thromboembolism (VTE) affects >1 million Americans per year and is a major cause of disability and death.[1] As an adjunct to anticoagulation, mechanical thrombectomy in peripheral veins serves to alleviate patient symptoms and interrupt the acute damage caused by thrombus to the vein wall and valves, an early event in the pathophysiology of post-thrombotic syndrome (PTS).[2] Although venous thrombi are often categorized as acute, subacute, or chronic based on duration of patient symptoms, most are a combination of fresh, soft material and organized components.[3]

The Pounce™ Venous Thrombectomy System (Surmodics, Inc.), indicated for mechanical clot removal in the peripheral vasculature, rapidly removes fresh or organized, wall-adherent thrombus without the need for thrombolytics. The dual-action system features a wall-apposable basket for clot disruption and a powered rotational extraction screw within the basket for clot maceration and active extraction. This efficient combination enables effective thrombus removal with a low (10 Fr) profile and a short (3-4 cm) spring-tensioned basket, which self-adjusts to vessel diameter to maintain wall contact (Figure). Operators may also manually collapse the basket to minimize wall apposition where desired and re-expand it for focal treatment. The system requires no capital equipment.

DESIGN CONSIDERATIONS

Professor Stephen Black, surgical lead at St Thomas' Hospital and professor of venous surgery at King's College London, consulted on the design of the Pounce™ Venous System. A co-principal investigator for multiple clinical trials in the venous space, Professor Black was also a lead investigator in the system's first-in-human (FIH) study.[4]

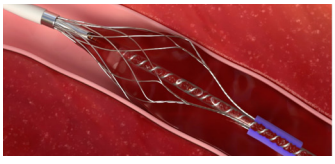
"I support the concept of a basket that can pass through tightly stenosed or fibrotic areas with relative gentleness on the vessel," he said. "This way, you're not trying to make the vein accommodate the device, you're using a device that accommodates the vessel."

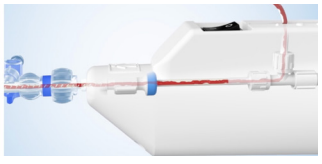
Professor Black is among the growing number of venous specialists who use intravascular ultrasound (IVUS) imaging prior to intervention. "I think it's important to work out what parts of the vein are full of thrombus and what parts are already chronically scarred," he said. "I want to see where the thrombus is and clean out those areas with a thrombectomy device. With the Pounce Venous device, you can manually narrow the basket in scarred vessels to target the acute-on-chronic disease. It doesn't make sense to me to try to remove the scar tissue itself, which essentially means you're removing remnants of the vessel. I'm going to balloon and stent those areas."

> "You're using a device that accommodates the vessel."
>
> –Stephen A. Black, MD

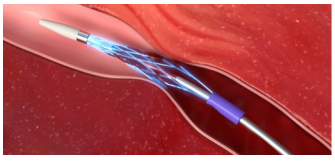
Power and control

Rotational Extraction Screw Technology
Designed to macerate and extract thrombus at the point of collection.





Dynamic Basket Technology
Self-adjusting basket maintains wall contact. Can be manually collapsed.



In the prospective, nonrandomized, multicenter FIH study, the primary endpoint of complete or near-complete thrombus removal* was obtained in all 19 subjects, with complete thrombus removal in most. These results were obtained with ≤3 device passes per patient. Although the study was limited to patients with ≤14-day symptoms, chronic components were found in 63% of thrombi removed. PTS (Villalta scale ≥5) was identified in 17 of 19 patients at baseline, with 11 patients scored as severe (≥15). Among 11 of 15 subjects† that completed their 12-month follow-up visit, the median Villalta score was 2 (range, 0.5–3.0).

"The excellent patient outcomes in this study reinforce why I've always been a big fan of this device," he said. "Because it works."

» ***Read Case Report: qrco.de/DrBlackCaseReport***

A HAPPY MEDIUM

For peripheral venous thrombectomy, most US physicians now use aspiration systems from Penumbra, Inc., or wall-apposed systems from Inari Medical. Interventional cardiologist Pradeep Nair, MD, with Cardiovascular Institute of the South in Houma, Louisiana, sees the Pounce™ Venous System as a "happy medium" between these options, adept at removing mixed-morphology thrombus with added versatility afforded by the system's size and operator control of powered extraction.

"The dual-action mechanism is an important benefit, especially in the current generation of thrombectomy tools available to us," he said. With the Pounce™ Venous System, "you're able to get active, effective extraction of fresh thrombus," he said. "In this respect, the system acts similarly to aspiration devices. That's a strong plus. But I don't think you can rely solely on aspiration, because you also have to deal with nidus of thrombus on the vein wall."

He finds the Pounce™ Venous System basket effective for disrupting this more organized, wall-adherent material. After an initial device pass, he may intermittently deactivate powered extraction to minimize blood loss.

In addition to having a low profile, the powered extraction mechanism within the system's 3–4 cm length basket removes clot at the point of collection, eliminating the need for additional clot collection with a trailing bag. In contrast, the ClotTriever™ catheter (Inari Medical) uses a 19 cm long collection bag with its 4.5 cm coring element. For Dr. Nair, the system's 10 Fr sheath compatibility and short basket make it well-suited for upper extremity cases. "In the upper extremities, we're looking for the smallest device possible to remove the maximum amount of thrombus," he said. "Here, the value of the Pounce™ Venous System's low profile is self-evident. If you're using a 16 Fr sheath versus a 10 Fr sheath, it could mean you're completely occluding the vein."

» ***Read Case Report: qrco.de/DrNairCaseReport***

EFFICIENCY AND EFFECTIVENESS

Interventional cardiologist Nachiket Patel, MD, with HonorHealth Heart Care in Mesa, Arizona, values the procedural efficiency he sees in the Pounce™ Venous System.

"As a private practice guy, I want safe, effective results that allow for the most efficient use of my time," he said. "The Pounce™ Venous System is a slam dunk for the vast majority of my venous cases," which he describes as uncomplicated superficial femoral and popliteal vein, mixed-morphology thrombosis.

"Even if a patient's symptoms started 2 days ago, there may be a lot of organized material in the vein. This system can take care of it. I don't want to have to open two devices."

For Dr. Patel, the ability to infuse contrast through the side ports on the Pounce™ Venous System catheter lends added efficiency.

"After making a pass that doesn't remove much thrombus, my thought is that I might be done, but let's take a picture," he said. "If there's a small amount of clot remaining, I can go back and just treat that area. Or, if I feel a little resistance, I can take a picture to see what's causing that."

Dr. Patel finds the short Pounce™ Venous basket easy to clean between passes. The basket's short landing zone also allows him to visualize the entire Pounce™ Venous System and guidewire in the patient's body in one view.

"When you're doing a large volume of cases, you want a go-to device you and your team can become very familiar with," he said. "I think this enhances procedural safety and proficiency with the device. For me, that device is the Pounce™ Venous System. There are a lot of advantages with this system I haven't found in other devices." ■

» ***Watch Case Video: qrco.de/DrPatelCaseVideo***

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*Achievement of Society of Interventional Radiology (SIR) grade II lysis (50%–95% thrombus removal) or grade III lysis (>95%) in treated vessels with freedom from procedural adverse events.

†COVID limited the ability to collect Villalta scores for 4 subjects.

Stephen A. Black, MD, FRCS(Ed), FEBVS
Professor of Venous Surgery, King's College London; Consultant Vascular Surgeon, St Thomas' Hospital; London, United Kingdom
Disclosures: Consultant to Medtronic, BD, Cook, Boston Scientific Corporation, Surmodics, Veryan, Inari, and Philips.

Pradeep K. Nair, MD, FACC, FSCAI
Interventional Cardiologist, Cardiovascular Institute of the South; Houma, Louisiana
Disclosures: Consultant to Philips, Bard, Boston Scientific, and Surmodics.

Nachiket J. Patel, MD, FACC, FACP, FSCAI
Interventional Cardiologist, HonorHealth Heart Care, Mesa, Arizona; Clinical Assistant Professor of Medicine at University of Arizona College of Medicine, Phoenix, Arizona
Disclosures: Consultant for Cagent, Philips, SIS Medical, Shockwave, and Surmodics.

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CASE REPORT

Removal of Extensive, Mixed-Morphology Lower Extremity Thrombus With the Pounce™ Venous Thrombectomy System

By Xavier S. Mohammed, MD

PATIENT PRESENTATION

A woman in her late 50s with a history of hypertension and diabetes presented with severe, debilitating pain in her left leg following several weeks of progressive symptoms. One week earlier, she was diagnosed with left leg deep vein thrombosis (DVT) and started on anticoagulation therapy; however, her pain persisted.

DIAGNOSTIC FINDINGS

CT scan revealed thrombus extending from the left tibial vessels to the external iliac vein, with May-Thurner narrowing. In the prone position, left popliteal access was obtained, a 12 Fr Pounce™ Sheath (Surmodics, Inc.) was placed, and a .035 guidewire and support catheter were navigated into the inferior vena cava. Venography demonstrated near-occlusive DVT from the accessed popliteal vein to the common iliac vein (CIV), with extensive collateralization (Figure 1).

TREATMENT

The .035 guidewire was exchanged for a .018 guidewire, and the Pounce™ Venous Thrombectomy System (Surmodics, Inc.) was deployed at the proximal CIV. The system removed acute and chronic thrombus extending from the CIV to the popliteal vein, resulting in restoration of flow (Figure 2). Balloon venoplasty was performed at the May-Thurner stricture in the CIV; however, intravascular ultrasound (IVUS) showed continued stenosis (Figure 3). A 14 X 60 mm Zilver Vena® Venous Self-Expanding Stent (Cook Medical) was deployed at the site of the stricture. Subsequent venography showed occlusive thrombus distal to the new stent (Figure 4). With caution, the Pounce™ Venous System was used to clear the thrombus, and brisk flow was established through the stented CIV (Figure 5).

POSTPROCEDURAL OUTCOMES AND PHYSICIAN OBSERVATIONS

The patient was discharged with a 6-month anticoagulation regimen. At 2-month follow-up, she was ambulatory, and a lower extremity duplex ultrasound exam confirmed venous patency.

Due to the duration of this patient's symptoms and the likelihood of organized occlusive clot, I selected the Pounce™ Venous Thrombectomy System with its wall-apposed basket for this case. The ability to manually narrow the system's basket helped in removing clot in tight strictures with minimal patient discomfort. I also appreciated the system's ease of use in allowing treatment near a freshly placed stent. ■

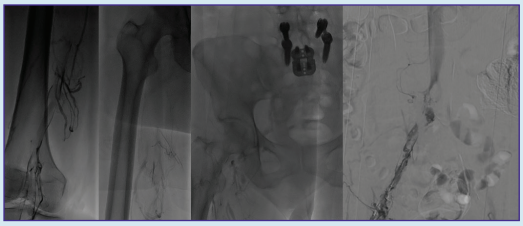


Figure 1. Initial venogram showing near-occlusive DVT extending from the accessed popliteal (far left) vein to the CIV (far right) and extensive collateralization.

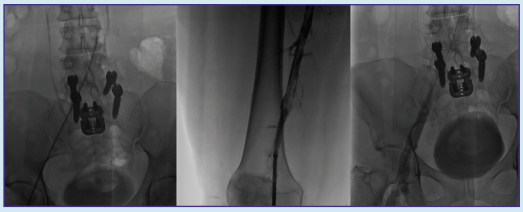


Figure 2. Thrombectomy with the Pounce™ Venous System removing extensive acute and chronic clot (left). Subsequent restoration of flow (center and right).

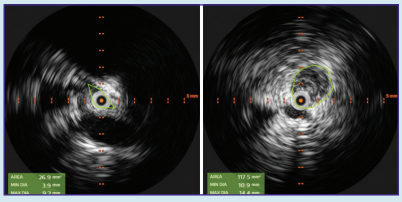


Figure 3. IVUS showing continued narrowing at the CIV May-Thurner stricture following venoplasty.

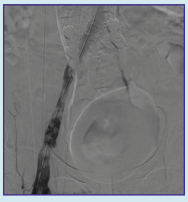


Figure 4. Thrombus observed distal to newly placed venous stent.

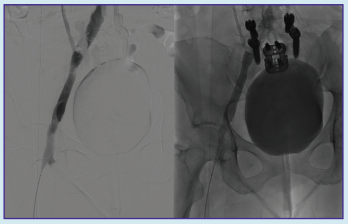


Figure 5. Final images show widely patent stented iliac veins with brisk flow and resolution of collateral vessels following Pounce™ Venous System thrombectomy.

Xavier S. Mohammed, MD
Interventional Radiologist
ChristianaCare
Newark, Delaware
Disclosures: None.

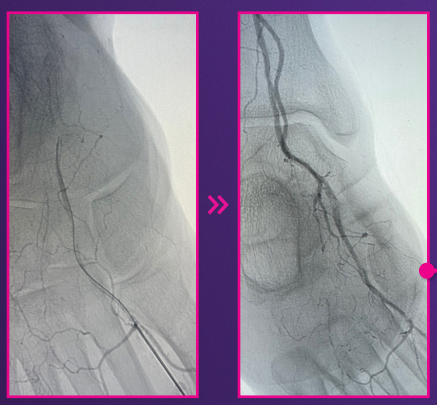
PERIPHERAL ARTERIAL CLOT?

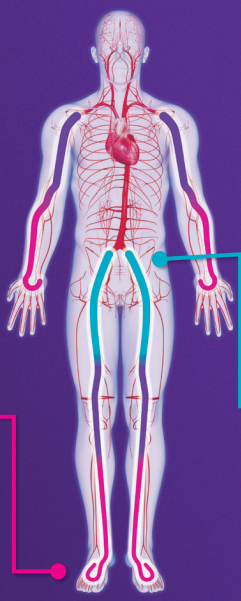
#POUNCEIT

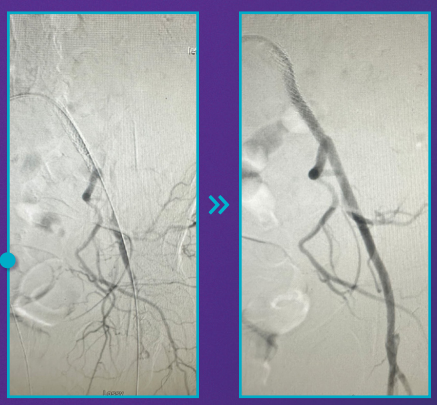
From the common iliac artery to the pedal loop, the Pounce™ Thrombectomy Platform removes acute or chronic peripheral arterial clot.

NO aspiration, NO capital equipment, NO thrombolytics required.

2–10MM COMBINED VESSEL DIAMETER RANGE







Pounce Thrombectomy LP

2–4mm

Pounce Thrombectomy

3.5–6mm

Pounce Thrombectomy XL

5.5–10mm

PROWL REGISTRY

Real-world data on the **Pounce™ Thrombectomy System** for the non-surgical removal of emboli and thrombi in the peripheral arterial vasculature. NCT05868161

Decide with Data: Latest PROWL Registry Results »

Intended Use: The Pounce™ Thrombectomy System is intended for the non-surgical removal of thrombi and emboli from the peripheral arterial vasculature.
Caution: Federal (US) law restricts these device(s) to sale by or on the order of a physician. Please refer to Instructions for Use for indications, contraindications, warnings, and precautions.

SURMODICS