

Crossing the Rubicon: A Closer Look at the Pedal Loop Technique

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The outcome of peripheral bypass surgery in patients at risk of limb loss is largely influenced by the anatomical integrity of the plantar arch. For this reason, in the last few decades, this area has been considered to be a sensitive territory, rarely approached surgically, and virtually untouchable by any endovascular activities. This hesitance was related to the possible damage to the thin dorsalis pedis, deep plantar, and lateral plantar arteries, together with the crucial metatarsal and digital branches arising from the arch. Twelve years ago, I argued that this area was anatomically very similar to the left anterior descending coronary artery and, thus, suitable for recanalization using standard endovascular coronary technique. Since its initial case, the pedal loop (PL) technique has become a very popular and glamorous procedure, likely performed in thousands of cases worldwide, additionally proving its efficacy in 2 large patient-registry retrospective analyses. Although the procedure is considered quite complex, from a technical point of view, it has almost no reliable alternatives in vascular and endovascular daily practice. However, by focusing attention on 12 well-established key points of the PL technique, it is likely that such may favor its diffusion among vascular surgeons and endovascular specialists.

“Alea iacta est” (“The die is cast”) said Julius Caesar in 49 BC while crossing the Rubicon river during the civil war between Gaul and Rome.¹ The phrase refers to his army crossing the river in the center-north of Italy, an irreversible decision, a point of no return.

At that time, this action was considered, per Roman laws, as an act of insurrection and in violation of the established rules.

In cardiovascular literature, the term has been rarely used; an example of which was to complain about the lack of consideration that left main coronary artery stenting had in the international guidelines in 2009,² despite being the technique

increasingly performed in most interventional cardiology departments.

Overcoming the existing rules in medicine is generally not allowed by ontological and scientific regulations without a possible reasonable benefit.

It is unusual for an already known disease to have a novel approach discovered and for the therapeutic solution to be quickly provided and immediately widely accepted.

This lucky event is uncommon in science, generating a combination of both surprise and interest among the involved medical community and, unfortunately, also an occasional immediate response to plagiarize.

THE CASE

On May 4, 2005, a 71-year-old diabetic woman, with a very painful nonhealing heel ulcer from 6 months, was admitted to Abano Terme Hospital, Padua, Italy, where, for 3 years, I was the only endovascular consultant.

Transcutaneous oxygen tension (TcPO₂) measurement at admission was as low as 26 mm Hg.

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