17 **Brown KA**, Rowen M. Extent of jeopardized viable myocardium determined by myocardial perfusion imaging best predicts perioperative cardiac events in patients undergoing noncardiac surgery. *J Am Coll Cardiol* 1993;**21**:325–30.
18 **Tang WHW**, Philip K, Hazen SL, *et al*. Comparative sensitivities between different plasma B-type natriuretic peptide assays in patients with minimally symptomatic heart failure. *Clin Cornerstone* 2005;**7**(suppl 1):S18–24.
19 **Tang WH**, Girod JP, Lee MJ, *et al*. Plasma B-type natriuretic peptide levels in ambulatory patients with established chronic symptomatic systolic heart failure. *Circulation* 2003;**108**:2964–6.
20 **Mueller T**, Gegenhuber A, Poetz W, *et al*. Preliminary evaluation of the AxSYM B-type natriuretic peptide (BNP) assay and comparison with the ADVIA Centaur BNP assay. *Clin Chem* 2004;**50**:1104–6.
21 **Eagle KA**, Berger PB, Calkins H, *et al*. ACC/AHA guideline update for perioperative cardiovascular evaluation for noncardiac surgery—executive summary: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1996 Guidelines on Perioperative Cardiovascular Evaluation for Noncardiac Surgery). *J Am Coll Cardiol* 2002;**39**:542–53.
22 **Mangano DT**, Goldman L. Preoperative assessment of patients with known or suspected coronary disease. *N Engl J Med* 1995;**333**:1750–6.
23 **Heeschen C**, Hamm CW, Mitrovic V, *et al*. N-terminal Pro-B-type natriuretic peptide levels for dynamic risk stratification of patients with acute coronary syndromes. *Circulation* 2004;**110**:3206–12.
24 **Bibbins-Domingo K**, Ansari M, Schiller NB, *et al*. B-type natriuretic peptide and ischemia in patients with stable coronary disease: data from the Heart and Soul Study. *Circulation* 2003;**108**:2987–92.
25 **Hama N**, Itoh H, Shirakami G, *et al*. Rapid ventricular induction of brain natriuretic peptide gene expression in experimental acute myocardial infarction. *Circulation* 1995;**92**:1558–64.

IMAGES IN CARDIOLOGY

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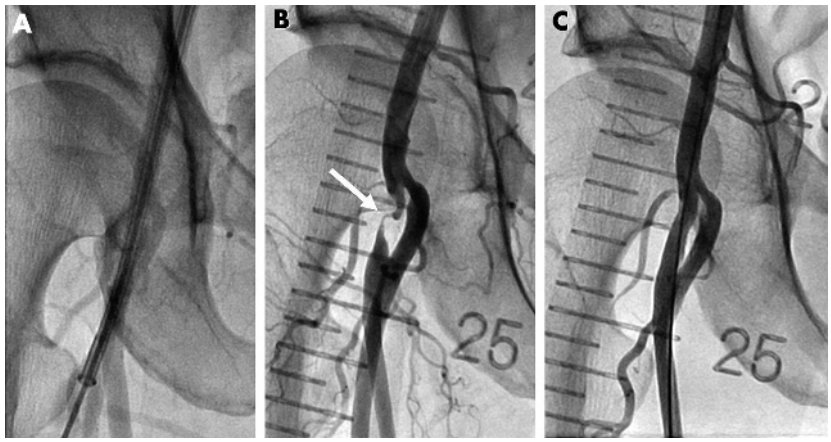
Focal femoral artery narrowing caused by suture mediated closure device

This case illustrates a puncture-site arterial narrowing due to complications resulting from the use of a suture-mediated closure device. We treated it successfully by balloon angioplasty. However, we could not explain how the complication occurred. Could we explain this finding as a thrombotic occlusion or an inflammatory reaction?

For evaluation of renal artery stenosis, a 75-year-old woman underwent a peripheral angiogram from a right femoral artery puncture, using a 6 French vascular sheath. The angiogram revealed minimal luminal narrowing in both renal arteries and no significant luminal narrowing at the right femoral artery puncture site (panel A). After the procedure, the arteriotomy site was closed with a 6 French Perclose AT device (Perclose; Redwood City, California, USA) without immediate complications. There was no evidence of a haematoma or bruit at the puncture site the next day and the patient was discharged the day after the arteriogram. One month later, she complained of severe right calf pain and intermittent claudication of the right leg. During the past month, there were no signs of infection and inflammation in the puncture site. Physical examination revealed a decrease in the pulsation of the right dorsalis pedis artery. Therefore, peripheral angiography was again undertaken via the left femoral artery access. The selective right femoral artery angiogram revealed focal severe luminal narrowing at the right superficial femoral artery (panel B). The narrowing was different from the atherosclerotic stenosis in morphology. The balloon angioplasty was done at the narrowing lesion. The final arteriogram revealed no residual stenosis and excellent blood flow in the superficial femoral artery (panel C). The patient was discharged the next day and the claudication and right calf pain resolved. The patient has remained asymptomatic for three months after angioplasty.



(A) Right femoral arteriogram taken before closure of the puncture site shows a 6 French vascular sheath in the femoral artery. There was no significant stenosis at the femoral artery. (B) One month after the procedure a right femoral arteriogram was performed from a left femoral approach, showing a severe focal stenosis (arrow) at the origin of the superficial femoral artery. (C) Post-angioplasty arteriogram shows satisfactory dilatation of the narrowing with good flow in the superficial femoral artery.

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