A multifaceted approach to intracoronary thrombus: Use of pharmacology, an aspiration catheter and an embolic protection device

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A 50-year-old smoker sustained an acute coronary syndrome. A culprit lesion (Figure 1A) with a column of attached thrombus (Figure 1B) was demonstrated at angiography.

Several pharmacological and mechanical options were considered (1). An inappropriately long stent would be required to 'direct stent' the lesion and to 'trap the thrombus' behind the stent struts. Use of a proximal protection device (Proxis, St Jude Medical, USA) to arrest coronary flow, aspirate the thrombus and deploy a shorter stent was also considered (2). The favoured approach was to deploy a distal embolic protection device below the thrombus (Spider EX, ev3 Inc, USA). The device was passed

across the lesion on a guidewire, and the sheath encasing the device was withdrawn to allow the basket or 'windsock' to open (Figure 1C). Despite ballooning the lesion (Figure 1D), a globular filling defect remained (Figure 1E). An aspiration catheter (Pronto, Vascular Solutions, USA), primed by negative pressure, was used to extract the clot (Figure 1F) (3). The lesion was stented and the basket resheathed and withdrawn. The contents of the aspiration catheter syringe revealed a column of thrombus and debris (Figure 1E). Irrigation of the basket demonstrated further embolized material (Figure 1H). A satisfactory final angiographic appearance was obtained (Figure 1G) with prompt distal flow.

Figure 1

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Distal clot embolization is a known complication of percutaneous coronary intervention. Although no therapy has been shown to 'solve' this problem, appropriate pharmacological therapy, use of aspiration catheters (3) and selected use of embolic protection devices (4,5) may be considered on a case-by-case basis.

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