Re: Novel Use of a Pneumatic Compression Device for Haemostasis of Haemodialysis Fistula Access Catheterisation Sites

Daniel M. Conroy¹ · Jennifer Hanko¹ · Richard Lindsay¹

Received: 28 February 2017 / Accepted: 14 April 2017 / Published online: 3 May 2017

© Springer Science+Business Media New York and the Cardiovascular and Interventional Radiological Society of Europe (CIRSE) 2017

To the editor,

We read with great interest the recent article by O'Reilly et al on the use of a pneumatic compression device for haemostasis following fistula access procedures [1]. At our institution, we have used a Safeguard Radial Compression device (Merit Medical Systems Inc.) for haemostasis after arteriovenous fistula and graft procedures for a number of years, frequently after use of a 7 Fr sheath access. We have recently completed a retrospective review of our practice.

Over a 1-year period from 1 January to 31 December 2014, 145 separate procedures were performed on 101 patients with a maximum of four time separated procedures in one patient. The procedures were performed on 56 males and 45 females with an age range of 22–98 years.

In 116 cases (78%), a Safeguard device alone was used to achieve immediate haemostasis. Conversion from a Safeguard dressing to an alternative means of haemostasis was not required before completion of the procedure in any patient.

In eight cases (5%), a Safeguard device was intentionally not used; four cases digital compression alone was applied, three cases a purse string suture was used and in one case a 6 F Angio-Seal device (St Jude Medical, Minnesota, USA) was deployed following 9 F access.

In 21 cases (17%), the method of haemostasis could not be identified from the medical records.

Of the 116 patients in whom a Safeguard dressing was applied, two developed subcutaneous bleeding on the ward that required no further treatment. One patient with a history of prolonged bleeding following dialysis had ongoing bleeding from the access site following balloon deflation which necessitated placement of a non-absorbable suture and overnight admission.

Potential complications relating to Safeguard use which occurred more than 24 h after intervention developed in five patients. Two patients developed graft re-thrombosis following thrombectomy procedures on post-procedure days 4 and 12, respectively. Three patients developed previously unidentified painful bruising around their access points when they attended for dialysis; only in one patient did this prevent successful haemodialysis via the fistula.

We therefore support the authors' conclusion that the use of a Safeguard dressing is a rapid means of achieving haemostasis. It allows the patient to leave the interventional radiology suite with compression in situ, thus improving patient flow through the department.

Our review confirms that there is a low incidence of immediate or early complications including bleeding and thrombosis following use of a pneumatic compression device.

Compliance with Ethical Standard

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Reference

1. O'Reilly MK, Ryan D, Sugrue G, et al. *Cardiovasc Intervent Radiol*. 2016;39:1765. doi:10.1007/s00270-016-1428-9.

✉ Daniel M. Conroy
d.conroy@doctors.net.uk

Jennifer Hanko
jennifer.hanko@belfasttrust.hscni.net

Richard Lindsay
richard.lindsay@belfasttrust.hscni.net

¹ Department of Interventional Radiology, Belfast City Hospital, Lisburn Road, Belfast BT9 7AB, UK