European Journal of Vascular and Endovascular Surgery 44 (2012) 300

Contents lists available at SciVerse ScienceDirect

European Journal of Vascular and Endovascular Surgery

journal homepage: www.ejves.com

Invited Commentary

Commentary on 'Outcome after VAC Therapy for Infected Bypass Grafts in the Lower Limb'

T. Bisdas*

Clinic for Vascular and Endovascular Surgery, University of Muenster and St. Fanziskus Hospital, Albert-Schweitzer Campus 1, D-48149 Muenster, Germany

Dr Acosta should be congratulated for sharing one of the largest experiences regarding infected bypass grafts in the lower limb treated with vacuum-assisted wound-closure (VAC®) therapy. In my opinion, three important issues deserve attention:

(1) *Graft excision or preservation*? Although the classic treatment's principle against vascular graft infections (VGIs) is the complete excision of the graft,[1] this aspect has been strongly challenged in peripheral vascular surgery.[2] However, the reported data remain still limited and very heterogenic to make robust conclusions. Noteworthy is the study from Cleveland Clinic, who reported 82% reinfection rates after partial graft excision and only 13% after complete removal (mortality: 18%, cumulative survival at 5 years: 77%, amputation: 40%).[1] Of note, all deaths occurred in patients in whom limb salvage was still being attempted at the time of their death.[1] Looking at the trend, Dr. Acosta observed lower amputation rates (33%), but still higher mortality rates (55%). However, no direct comparison is feasible. Important, in any case, is, that successful graft preservation requires patent bypass anastomoses and a haemodynamically stable patient.[2] Moreover, graft preservation of infected Dacron prostheses is not recommended.[3]

(2) *Best preservation protocol*? The standard protocol in the case of graft preservation consists of: (a) aggressive debridement of the wound bed, (b) early coverage with rotational vascularised muscle flaps, (c) VAC device or frequent dressing changes and (d) skin graft (once the wound bed is prepared).[2] In this context, Dr. Acosta added a novel risk factor in the literature showing that the presence of two infected synthetic bypasses is associated with increased adverse events (major amputation, reinfection and non-healing), despite the aforementioned measures. Thus, graft excision might be more beneficial as first-line treatment in such cases.

(3) *Portable mini-VAC or traditional VAC device*? Finally, a very interesting issue in the therapeutic algorithm of the vascular centre in Malmö was the use of a mini-VAC portable device, which allows patient's treatment at home (of course, after coverage of the wound with granulation tissue). Considering the financial burden of VGIs in our tax- and insurance-funded health-care systems, such an economically beneficial type of therapy should be further investigated for its cost-effectiveness and safety.

In conclusion, we are still looking for the treatment of choice against lower-limb VGIs. However, well-documented and designed retrospective studies such as this of Dr. Acosta will definitely optimise the current treatment strategy. Unfortunately, the low incidence of VGIs will always be the main drawback to perform randomised controlled trials, which may answer all of our questions.

References

1 Mertens RA, O'Hara PJ, Hertzer NR, Krajewski LP, Beven EG. Surgical management of infraingunial arterial prosthetic graft infections: review of a thirty-five-year experience. *J Vasc Surg* 1995;**21**:782–90.

2 Herrera FA, Kohanzadeh S, Nasseri Y, Kansal N, Owens EL, Bodor R. Management of vascular graft infections with soft tissue flap coverage: improving limb salvage rates – a veterans affairs experience. *Am Surg* 2009;**75**:877–81.

3 Calligaro KD, Wescott CJ, Buckley RM, Savarese RP, DeLaurentis DA. Infrainguinal anastomotic arterial graft infections treated by selective graft preservation. *Ann Surg* 1992;**216**:74–9.

DOI of original article: 10.1016/j.ejvs.2012.06.005.

* Tel.: +49 (0) 251 83 45781; fax: +49 (0) 251 83 45787.
E-mail addresses: Theodosios.Bisdas@ukmuenster.de, th.bisdas@gmail.com.

http://dx.doi.org/10.1016/j.ejvs.2012.06.016