

Stents and stent grafts for vascular-access stenoses that have failed angioplasty

Data on the use of stents and stent grafts in the treatment of vascular-access-related stenoses are conflicting. In a retrospective review, Vesely *et al.* evaluated the outcomes of 51 hemodialysis patients from their US center who had polytetrafluoroethylene grafts and who underwent insertion of a stent or stent graft for the treatment of a venous stenosis that had failed to improve with angioplasty.

Among the study group, 40 patients had residual stenosis of greater than 30% following angioplasty, and 11 patients had angioplasty-induced ruptures. Overall, 70 devices were inserted, 34 of which were metal stents and 36 of which were stent grafts. The technical success rate of device insertion was 100% and no complications associated with the insertion procedure were reported. The most commonly used devices were the S.M.A.R.T.[®] stent (Cordis, Miami Lakes, FL; $n=26$), the VIABAHN[®] stent graft (W.L. Gore & Associates, Newark, DE; $n=18$) and the aSpire stent graft (LeMaitre Vascular, Burlington, MA; $n=13$). According to Kaplan–Meier analysis, the primary patency rates of the vascular accesses were 81%, 70%, 54% and 13% at 1, 3, 6 and 12 months, respectively. The corresponding rates of secondary patency were 89%, 89%, 82% and 74%. The primary patency rate of the stents or stent grafts was higher than that of the vascular accesses at all time points.

The authors conclude that the use of stents or stent grafts to treat vascular-access-related stenoses that have failed angioplasty provides long-term outcomes that are comparable to those achieved with successful angioplasty.

Original article Vesely TM *et al.* (2008) Use of stents and stent grafts to salvage angioplasty failures in patients with hemodialysis grafts. *Semin Dial* 21: 100–104

Monitoring of carotid atherosclerosis for cardiovascular prognostication in ESRD

Carotid intima–media thickness (IMT) is a predictor of cardiovascular events in end-stage renal disease (ESRD), but whether changes in IMT or in other indicators of atherosclerosis have additional predictive value is not known.

Benedetto *et al.* used carotid ultrasonography in patients with ESRD to assess whether longitudinal measurement of markers of atherosclerosis provides useful information on cardiovascular prognosis.

All 135 dialysis patients enrolled in this observational study underwent echo-color Doppler of the carotid arteries at baseline, and 103 underwent this procedure again, after an average of 15 months (range 11–19 months). Changes in mean carotid IMT, wall:lumen ratio, internal diameter, and cross-sectional area were not significant, were not related to the increase observed in the number of carotid atherosclerotic plaques (which was significant [$P<0.001$]), and failed to predict death and cardiovascular events during follow-up after the second ultrasound assessment (mean follow-up 28 ± 14 months). After adjustment for various risk factors including age and smoking, formation of new atherosclerotic plaques was found to be associated with fatal or nonfatal cardiovascular events ($P=0.01$). The number of plaques at baseline also independently predicted formation of new plaques ($P=0.004$), but the prognostic power of baseline plaque number for cardiovascular events ($P=0.003$) increased by 8% when new plaque formation was added as a variable.

Ultrasound imaging of changes in carotid plaque burden, but not of changes in IMT or other markers of carotid atherosclerosis, could, therefore, be useful for determining cardiovascular prognosis in patients with ESRD.

Original article Benedetto FA *et al.* (2008) Rate of atherosclerotic plaque formation predicts cardiovascular events in ESRD. *J Am Soc Nephrol* [doi:10.1681/ASN.2007070813]

Protocol biopsies lead to improved function of living-donor renal allografts

Protocol biopsies facilitate early detection of acute rejection and chronic allograft nephropathy after renal transplantation, but few data on the outcomes of this approach in recipients of living-donor kidneys are available. Kurtkoti *et al.* conducted a prospective randomized trial to assess the utility of protocol biopsy, combined with any resulting changes in management, in this setting.

The study involved 102 patients who had undergone living-donor kidney transplantation