4:15

761-2 Major Ischemic Events After Successful Treatment of Saphenous Vein Graft Lesions — Importance of Angiographically "Non-Significant" Lesions

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Patients (pts) with percutaneous intervention (PTCR) of saphenous vein graft (SVG) lesions have a high rate of recurrent ischemic events (RIE) (death, MI, CABG, PTCR). To investigate the etiology and timing of these adverse outcomes, all pts with successful SVG PTCR in a study with required follow-up cath during 1990-93 were studied (n = 102). The initial PTCR in these pts was stent = 59 sites, angioplasty = 59, TEC = 45, other = 16. SVG were each prospectively divided into 7 segments (seg) (total evaluated = 1067). SVG and native (NAT) vessels were separated into those with and without initial treatment (rx).

% of Recurrent Ischemic Events During Interval

Time	Event-free Survival	SVG-rx	SVG-no rx	NAT-RX	NAT-no rx
6 mos	67.0%	55	27	4	14
12 mos	49.0%	57	24	5	14
18 mos	40.4%	25	50	0	25
36 mos	25.8%	33	44	0	22
overall	–	50	30	4	16

RIE in initially rx'd SVG-seg were correlated with initial % caliper stenosis (initial > 75%: 43% RIE, 50–75%: 27%, < 50%: 18%, p = 0.01), but not final % stenosis. RIE in initially non-rx'd SVG-seg were correlated with reference SVG diameter (p = 0.002) and especially with initial % stenosis (initial ≤ 30%: 1.8%RIE, 31–40%: 28.6%, 41–50%: 37.8%; p < 0.001).

Conclusions: 1) RIE after SVG PTCR are common; 2) events from the initially treated site(s) predominate for the first 6–12 mos, while events from non-treated SVG sites predominate later; 3) the high rate of RIE from non-treated ≅ 36–50% stenoses suggests a need for increased surveillance in pts with these lesions; and 4) the low rate of RIE from treated < 50% stenoses suggests that the hypothesis that these "non-significant" lesions might best be treated initially should be examined.

4:30

761-3 Favorable Results of Debulking Followed by Immediate Adjunct Stent Therapy for High Risk Saphenous Vein Graft Lesions

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Stents are the preferred therapy for saphenous vein graft lesions (SVG), but appropriate timing (immediate vs. staged) and optimal adjunct therapy before stenting in high risk (totally occluded, thrombus-containing, or degenerated) SVG are unknown. To determine the safety and efficacy of a strategy comprising initial thrombus/tissue debulking followed by immediate stenting, we reviewed our experiences with transluminal extraction atherectomy (TEC, n = 36) and excimer laser angioplasty (ELCA using saline flush technique and 2 mm catheters, n = 81) before stenting in high risk SVG. Baseline characteristics were similar for TEC + Stent vs ELCA + Stent and for the overall high risk SVG group (n = 117) included 92% unstable angina, mean graft age of 8.7 yrs, 21% thrombus, 9% total occlusions, and 20% SVG degeneration. Procedure success was defined as final diameter stenosis < 50% without major complications (death, Q-wave MI, or emergency CABG). Non-Q wave MI was defined as CPK-MB > 5 × normal.

	TEC + stent	ELCA + stent
Procedural success (%)	100	100
Major ischemic complications (%)	0	0
Non-Q Wave MI (%)	15.6	8.7
In-lab closure (%)	2.9	0
No-reflow (%)	2.2	0

We conclude: Debulking with TEC or ELCA followed by immediate stenting results in excellent procedure success and rare ischemic or angiographic complications. Thus, TEC or ELCA + stents may be the preferred interventional therapy for high risk SVG lesions.

4:45

761-4 Anatomy Reconstruction of Native Coronary Arteries and Vein Grafts With the Less Shortening Self-Expandable Wallstent

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The modifications in braiding angle of the self-expanding Wallstent has resulted in less shortening upon expansion and a reduction in radial force. The customized range of diameters (3.5–6.0 mm) and lengths (18–49 mm) after the deployment of an oversized Wallstent allow to treat very long and complex lesions in native coronary arteries or grafts.

Between December 1994 and July 1995, 60 patients(pts) with complex long (lesion length: 29.8 ± 14.9 mm) were treated with implantation of 1 (39 pts) or more (21 pts) Wallstents selected with an unconstrained nominal diameter of 1.5 mm greater than maximal diameter vessel (MDV). Post stent delivery, high pressure (> 15 atm) intra stent inflation was systematicaly performed.

The vessel distribution was RCA: 20, LAD :15, LCX :9, SVG :21 The average nominal diameter and length of deployed Wallstent was 4.6 ± 0.64 mm and 33.3 ± 9.2 mm. The pre-MVD was 3.48 ± 0.42 mm and the post stent minimun lumen diameter was 3.4 ± 0.51 mm. Post procedure therapy consisted of aspirin and ticlopidine. One patient (1.7%) stopped ticlopidine on day 10 and sustained subacute closure on day 17 successfully treated with streptokinase. No other subacute thromboses, deaths, myocardial infarctions or repeat interventions occurred between 1 to 7 months of clinical follow-up.

Conclusion: The use of oversized and long Wallstent allows a reconstrution of lumen and a resetting of the vessel size. Initial clinical results with ticlopidin + aspirin appear promising. Long term angiographic follow-up remains to be determined.

5:00

761-5 Compassionate Endoluminal Grafting for Percutaneous Treatment of Aortocoronary SVG Disease

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Endoluminal grafts (ELG) composed of an expandable PTFE tube graft/Palmaz stent device were implanted percutaneously with a low-profile system to treat saphenous vein graft (SVG) disease in 6 patients with no other surgical or percutaneous treatment options. Mean patient age was 64 y (range 47–77). Three patients had aneurysms, 2 had multiple restenoses, and 1 had diffuse disease. Two cases were unsuccessful as a result of prolonged hypotension during attempted graft insertion in one case, which responded to fluid and blood administration, and the inability to predilate the lesion in the second case. Procedural success was achieved in four patients (67%). In these cases, ELGs were deployed in the SVG to the right coronary artery in one patient and in the SVG to the obtuse marginal branch in three patients. Mean graft age was 122 months (range 19–240). Mean lesion length was 38 mm (range 25–49) and graft length was 68 mm (range 52–92). At mean 260-d follow-up (range 186–392), angiography confirmed widely patent grafts in two patients and three instances of subacute thrombosis in the remaining two patients. At last follow-up, all 4 patients remained free of angina. These early results indicate that ELGs may be an effective treatment for aneurysmal and severely diseased SVGs in patients with poor percutaneous or surgical options. The size of the diseased SVG may play a role in the success of the procedure: in this series, subacute thrombosis has been seen only in smaller grafts (< 3 mm); grafts > 4 mm had no angiographic, angioscopic, or ultrasound evidence of intimal growth. Further study is warranted to determine if the nonporous PTFE graft is resistant to intimal growth in follow-up.

5:15

761-6 Autologous Vein Graft-Coated Stent for the Treatment of Coronary Artery Disease: Immediate Results After Percutaneous Implantation in Humans

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Background: Acute closure and late restenosis remain the major limitations of stenting. We have earlier reported the successful experimental application of the autologous vein graft-coated stent (AVGCS), that consists of a conventional stent covered by a vein graft. We now report the immediate results of the implantation of the AVGCS in 13 patients (pts) with coronary artery disease. *Methods:* The right cephalic vein was isolated and approximately