POSTER SESSION

1052 Clinical Results With Coronary Stents

Sunday, March 30, 2003, 3:00 p.m.-5:00 p.m.
McCormick Place, Hall A
Presentation Hour: 3:00 p.m.-4:00 p.m.

1052-178 Accelerated Transplant Vasculopathy Portends Proliferative Restenosis After Percutaneous Coronary Intervention in Cardiac Transplant Patients

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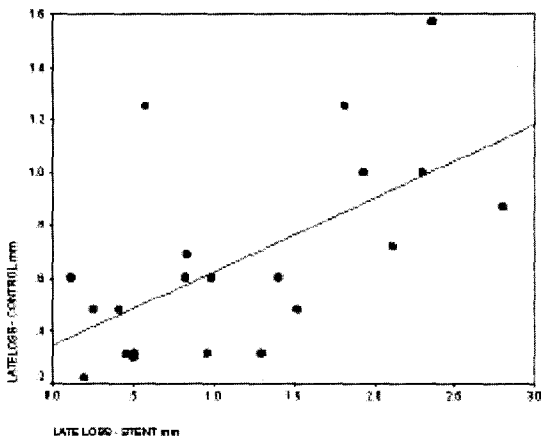
Background: Allograft vasculopathy (AV) after cardiac transplant (TX) causes diffuse concentric narrowing. Percutaneous intervention(PCI) is widely used in treating AV. We evaluated 1-year clinical and quantitative angiographic (QCA) results of PCI in TX pts. **Methods:** 432 pts underwent TX at Brigham & Women's Hospital from Feb 1984 to Aug 2001. Of these, 24 (92% male, mean age 55 yrs) underwent PCI of 49 lesions. Core-lab QCA determined % diameter stenosis (DS), reference (RD) and minimal lumen (MLD) diameters. **Results:** Procedural success was 98.0%. Of 24 pts, 5 (21%) died within 1-year of PCI. QCA of 24 PCI lesions in 14 pts (74%) with 1-year follow up revealed pre-procedure: (RD 2.61±0.23mm, MLD 0.39±0.28mm, % DS 85.1±11.0) and post procedure: (RD 2.74±0.25mm, MLD 2.27±0.38mm, % DS 17.6±8.9, acute gain 1.88±0.47mm). One year follow up showed(RD 2.59±0.22mm, MLD 1.25±0.80mm, % DS 52.0±29.6) a Late Loss (LL) of 1.02±0.82mm and loss index of 0.55±0.43. Restenosis (DS>50%) occurred in 11(46%) lesions. Seventeen matched AV lesions(DS 28.2%±11.4) at a non-PCI site had a LL of 0.66±0.38mm. Pts with restenosis also had greater LL at the non-intervened matched site than patients without restenosis(0.94±0.36mm vs 0.40±0.16mm, p=0.003). Patient-specific LL at PCI and non-PCI sites correlated significantly (r=0.65, p=0.001, figure) **Conclusions:** PCI in TX pts has high procedural success. Restenosis rates are high in pts with rapid progression of AV suggesting common mechanisms.



1052-179 Stenting of de-Novo Lesions on Unprotected Left Main Coronary Artery: Results of a Five-Year Follow-Up Period

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Background: Surgical revascularisation is the standard procedure in patients (pts) with unprotected left main disease (LMD). However, the increase use of stents, the improved operator experience and the results of several studies indicate high angiographic and clinical success rate after elective percutaneous coronary interventions.

Methods: In a period of 3 years we analyzed a consecutive cohort of 69 pts undergoing stenting for LMD. Only pts with acute myocardial infarction or/and cardiogenic shock were excluded. All pts had successful LM stenting. Clinical adverse events, death of any cause, myocardial infarction and target vessel revascularization, were monitored over a period of 5 years.

Results: Mean age was 71 ± 12 years, 25 (36%) were women and 15 (22%) had diabetes. Two patients died within the first 30 days after the intervention (2.9%). Five-year overall survival (84.7%) and survival free of adverse events (62.9%) are shown in figures 1&2. Most of the adverse events consisted of reinterventions (21.8%) due to restenosis in the left main vessel or the ostia of the left anterior descending or left circumflex arteries.

Conclusion: In high-volume interventional centers, stenting enables favorable short and long-term results considering the high-risk profile of patients with left main coronary artery disease. These and previous results in the same category of patients reinforce the need of randomized clinical trials comparing bypass surgery with stenting in patients with left main disease.

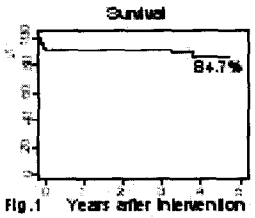

Fig.1

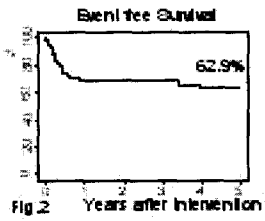

Fig.2

1052-180 Safety of Percutaneous Coronary Interventions Without On-Site Cardiac Surgery: A Recent 10-Year Experience of 5,909 Cases

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In the past 10 years, stents and platelet IIb/IIIa inhibitors(IIbIIIa) have improved the safety and outcomes of percutaneous coronary interventions(PCIs). These advances may be especially important in hospitals performing PCIs without on-site cardiac surgery.

The Royal Alexandra Hospital(RAH) has performed PCIs without on-site cardiac surgery for over 20 years. Surgical support is provided at a regional centre 6 km away on a next available OR basis. Excellent rapport with cardiac surgeons was maintained through joint weekly rounds. At RAH, stents were introduced in 1993 and IIbIIIa in 1997. From 1992-2001, 5,909 PCIs(7,440 lesions) were performed. Overall lesion success was 94.8% and major complication rate was 1.4%(death 0.6%. MI 0.5%, emergency bypass 0.3%), including cardiogenic shock patients. No patient died before emergency bypass or perioperatively. Over the 10-year period, there was a significant rise in patient acuity, urgency and ad hoc procedures. This was counterbalanced by an increase in the use of stents, IIbIIIa and in operator case experience, with significant improvement in success and decrease in major complication rates(see table).

Our results showed that with good operator experience, rapport with cardiac surgeons, and the use of stents and IIbIIIa, PCIs can be performed safely with high success rates and very low complication rates without on-site cardiac surgery.

10-Year PCI Results (*P<.01 vs 92-93,**P<.001 vs 92-93,+P<.001 vs 96-97)

Year	92-93	94-95	96-97	98-99	00-01
No. of PCIs	453	767	944	1345	2400
No. of Lesions	521	894	1136	1785	3104
Interventionalist Case Experience/Year	113	192	266	269	400
Primary/Rescue PCI	10	53	104	109	138*
CCS Class 4 Patients	32.9%	39.6%	68.1%	67.9%	66.1%**
IIb/IIIa Use	n/a	n/a	8.1%	23.0%	48.9%+
Stent Use	2.9%	19.4%	51.1%	71.4%	82.2%**
Urgent/Emergency PCI	57.4%	68.4%	77.3%	78.3%	75.2%**
Ad hoc PCI	47.7%	54.6%	53.9%	61.0%	72.4%**
Lesion Success	90.2%	90.8%	93.8%	93.9%	97.6%**
Death/MI/Emergency Bypass	2.4%	3.1%	1.6%	1.4%	0.6%**

1052-181 Late In-Stent Restenosis Occurring After 12 Months Is Common and the Predictors Are Similar to Early In-Stent Restenosis

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Background: In-stent restenosis (ISR) is thought to end by 12 months. Restenosis after this period has not been described.

Methods: From our clinical and intravascular ultrasound (IVUS) core laboratory databases we identified patients with native coronary stent procedures who returned to this institution with in-stent restenosis.

Results: From 621 cases of in-stent restenosis, we identified 333 (53.62 %) with early ISR (≤ 6months), 167(26.89%)with ISR between 6-12 months and 121 (19.48%) with late ISR (≥ 12months). There was no difference in demographics between the groups, including frequency of diabetes (34.2%, 25.7%, 36.4%). Lesion characteristics were also similar, ostial lesions (7.6%, 8.2%, 12.5%) and vessel size mm(2.77 +/- 0.64, 2.83 +/- .70 , 2.84 +/- .60). In order to further study the patients with late ISR, we performed volumetric analysis on a subset of late ISR cases compared to early ISR cases. We examined the plaque morphology and consistency, stent volume, and the percent of plaque volume within the stent volume. When comparing early to late ISR IVUS did not detect any qualitative or quantitative difference.