

10:45

ANGIOPLASTY OF THE PROXIMAL LEFT ANTERIOR DESCENDING ARTERY: LONG-TERM FOLLOW-UP.

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This study reviews the immediate results and the long term clinical course of 537 consecutive patients (mean age 58 years) who underwent elective angioplasty of the proximal left anterior descending artery (LAD) from 1984 through 1987. The clinical success rate was 96.1% (angiographic success without MI, CABG, or death). Procedural complications included MI: 2.2% (Q wave: 0.9%; non-Q: 1.3%), in hospital CABG: 3%, and two deaths (0.4%). Follow up was achieved in 99.5% of patients (pts) at a mean of 44 ± 17 months. Follow up catheterization was performed in 301 pts (76%) demonstrating a 40% angiographic restenosis rate. Ninety-eight pts (19%) required additional revascularization for recurrent LAD disease by either PTCA (14.3%), CABG (4.7%), or both (1.5%). During follow up, there was a 2.5% incidence of MI (anterior MI: 1.5%), and 27 pts (5.2%) died, 14 (2.7%) of cardiac death. Actuarial 5 year cardiac survival was 97%, freedom from cardiac death and MI 94%, and freedom from cardiac death, MI, CABG, and repeat LAD PTCA 77%. At last follow up 76% of pts were asymptomatic and 88% experienced sustained functional improvement.

In conclusion, angioplasty of the proximal LAD can be performed with a high success rate and low incidence of complications, as well as provide excellent long term cardiac survival, freedom from cardiac events, and sustained functional improvement.

11:00

ANGIOPLASTY APPEARS SUPERIOR TO REPEAT SURGERY FOR PATIENTS WITH TWO OR MORE PRIOR BYPASS OPERATIONS.

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Coronary artery bypass surgery in patients with two or more prior coronary artery bypass operations (CABOs) is associated with an operative mortality approaching 10%. To determine the immediate and late outcome of angioplasty (PTCA) in this surgically high-risk group, we analyzed all pts with two or more prior CABOs undergoing elective PTCA from 1980 to June 1990. A total of 242 pts underwent 380 separate PTCA procedures, including 37 procedures performed in patients with three to five prior CABOs. Mean age was 62 ± 8, and 90% were men. 80% had three-vessel disease; 77% had class III or IV angina; 65% had a prior myocardial infarction (MI); 19% had an ejection fraction (EF) ≤ 40%; 16% were diabetic; 12% were > 70 years old. Of 983 lesions attempted (mean = 2.6 per procedure), angiographic success was achieved in 95%. 686 native coronary non-left main lesions, 257 graft lesions, and 40 left main lesions were attempted with success rates of 94%, 98%, and 90% respectively. 39% of pts were completely revascularized. In-hospital death, procedure-related non-fatal MI, and urgent CABO rates were 0.5%, 1.3%, and 0.8% respectively. One-year and five-year actuarial survival were 96% and 80% respectively (mean follow-up = 33 months). There was a trend toward increased late mortality in the low EF group: for EF > 40%, one and five year survival rates were 97% and 83% respectively; for EF ≤ 40%, the one and five year survival rates were 95% and 68% respectively (p = 0.12).

In summary, PTCA can be performed in pts with two or more prior bypass operations with low procedural morbidity and mortality, and with good immediate and late results. PTCA appears superior to repeat operation for the surgically high-risk subset of patients with two or more prior CABOs.

11:15

COMPLETE REVASCULARIZATION IN PATIENTS WITH MULTIVESSEL CORONARY DISEASE: AN UNCOMMON PTCA OUTCOME

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PTCA is increasingly applied to patients with multivesSEL disease, in spite of reports showing relatively low rates of complete revascularization (CR) and poorer long term prognosis for patients with residual disease. Reasons for incomplete revascularization (ICR) were assessed in 618 patients with double (DVD) or triple vessel disease (TVD) in the 1985-86 NHLBI PTCA Registry. The PTCA operator was asked to describe the treatment plan and outcome for each significant lesion (≥50% diameter stenosis) in the Registry. Operator strategy by stenosis severity was:

Lesion severity	50-69%	70-79%	80-89%	100%
	N=456	N=304	N=904	N=251
#1. % amenable	94.2	95.1	94.0	62.9
#2. % of #1 intended	37.7	71.6	86.2	85.4
#3. % of #2 attempted	92.6	95.7	95.2	96.3
#4. % of #3 successful	94.0	89.9	80.5	53.8

Operator strategy per patient was:

	DVD %	TVD %	Total %
	N=447	N=171	N=618
Amenable to CR	79	71	77
Intended CR	39	21	34
Attempted CR	33	15	28
CR successful	23	9	19

Major reasons for ICR in patients with DVD or TVD include complete occlusions which are not PTCA amenable or are unsuccessfully attempted and less than severe (50-79%) coronary lesions for which PTCA is frequently not intended.

11:30

ANGIOPLASTY OF CHRONIC TOTAL CORONARY OCCLUSIONS - RESULTS OF A CONTROLLED RANDOMIZED TRIAL.

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Some uncontrolled studies have suggested that the Magnum wire system (0.021 inch shaft, 1 mm olive at the tip) is an almost perfect tool for the recanalization of chronic total coronary occlusions. To evaluate the usefulness of this new device, a controlled randomized trial was carried out in 102 patients with chronic (over 4 weeks) occlusions. The primary recanalization rates with the Magnum wire were compared with the 0.014 standard guide wire and the Omniflex catheter system.

The success rates of the Omniflex and the standard guide wire approach were similar (20/34 pts = 59% vs. 23/34 pts = 68%). The success rate was significantly (p < 0.01) lower with the Magnum system (11/34 pts = 32%). Failure was often due to the deviation of the system into side branches. Some failed Magnum cases (11/23 pts) could be managed successfully by Omniflex or standard guide wire. All procedures were performed without any complications. The restenosis rates were similar in all three groups after 6 months.

We conclude that the Magnum wire is inferior to the standard wire and the Omniflex recanalization systems and should not be used as a first line device.