Primary Stenting for Unprotected Left Main Coronary Artery stenosis during AMI

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Background

- AMI caused by LMCA occlusion is complicated by high mortality that resulted from pump failure and malignant ventricular tachyarrhythmias

Background

- Primary angioplasty or stenting have emerged as a valuable reperfusion strategy for management of AMI
- However, the issue of best approach to LMCA disease during AMI is controversial

Previous Studies

	Year	Balloon / Stent	In-hospital mortality	Long-term mortality
Quigley	1993	4/0	100%(4/4)	-
Chauhan	1997	6/0	83% (5/6)	-
ULTIMA	2001	23/17	55%(22/40)	57%
Yip	2001	8/10	33% (6/18)	56% (8/18)
Neri	2002	5/17	50%(11/22)	59%(13/22)
Luca	2003	10/14	58%(14/24)	63%(15/24)

Previous Studies

Predictors of survival

- Dominant RCA
- Good intercoronary collaterals (≥ 2)
- Post TIMI 3 flow
- Cardiogenic shock (negative predictor)

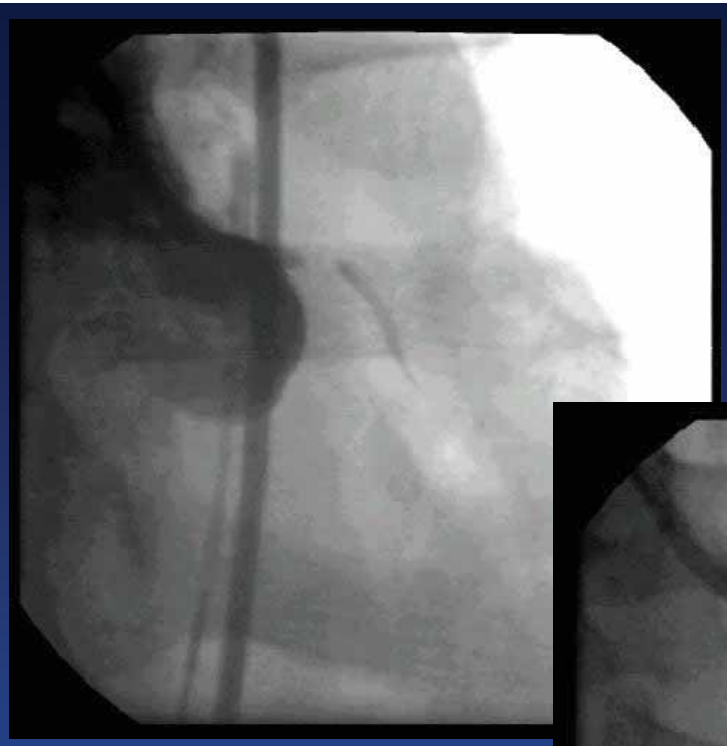
Purpose

- To evaluate *the clinical outcome and prognostic determinant* of primary stenting of unprotected LMCA stenosis during AMI

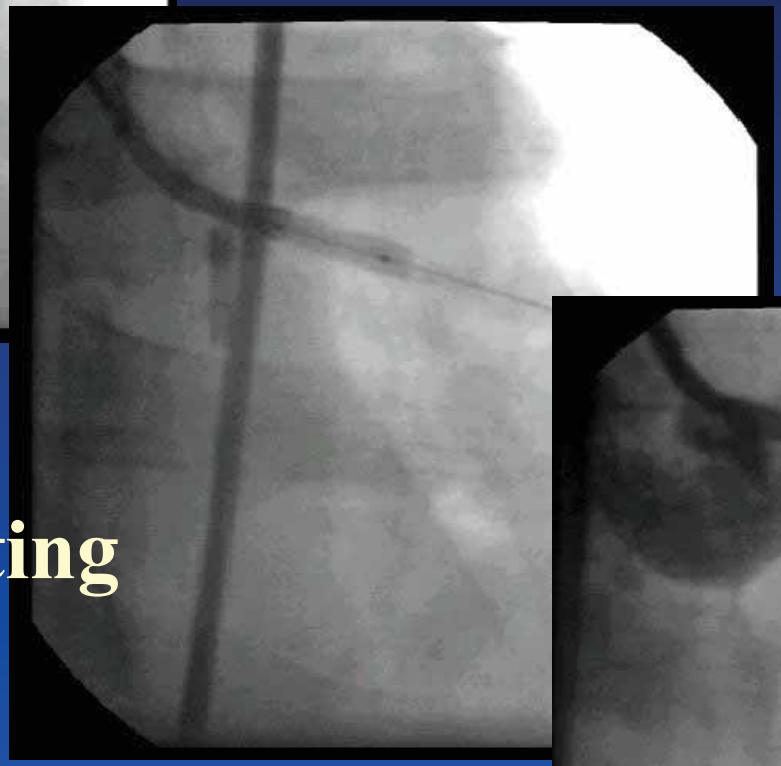
Methods

From July, 1996 to May, 2003

Primary stenting for LM in acute myocardial infarction was performed in 22 consecutive patients



Pre-intervention



Primary stenting

Final result

Baseline characteristics

	N=22
Age,yrs	58±12
Men	19 (86%)
Diabetes	3 (14%)
Hypertension	6 (27%)
Current smoker	12 (54%)
Hypercholesterolemia	7 (32%)

Baseline characteristics

	N=22
Prior MI	1 (5%)
Cardiogenic shock	18 (82%)
Ventilator support	7 (32%)
Abxicimab	12 (55%)
IABP support	18 (82%)

Angiographic characteristics

	N=22
Lesion location	
Ostium	3 (14%)
Body	8 (36%)
Bifurcation	11 (50%)
Lesion length (mm)	14±6
Ref vessel diameter (mm)	3.8±0.5

In-hospital outcomes

	N=22
Angiographic success(TIMI ≥2)	19 (86%)
Emergency CABG	2 (9%)
Elective CABG	2 (9%)
Other lesion stenting	6 (27%)
Death	8 (36%)

In-hospital outcomes

- ***Emergency CABG***

  was done in 2 patients after stenting within 24 hrs.

  : hemodynamic instability due to 3VD

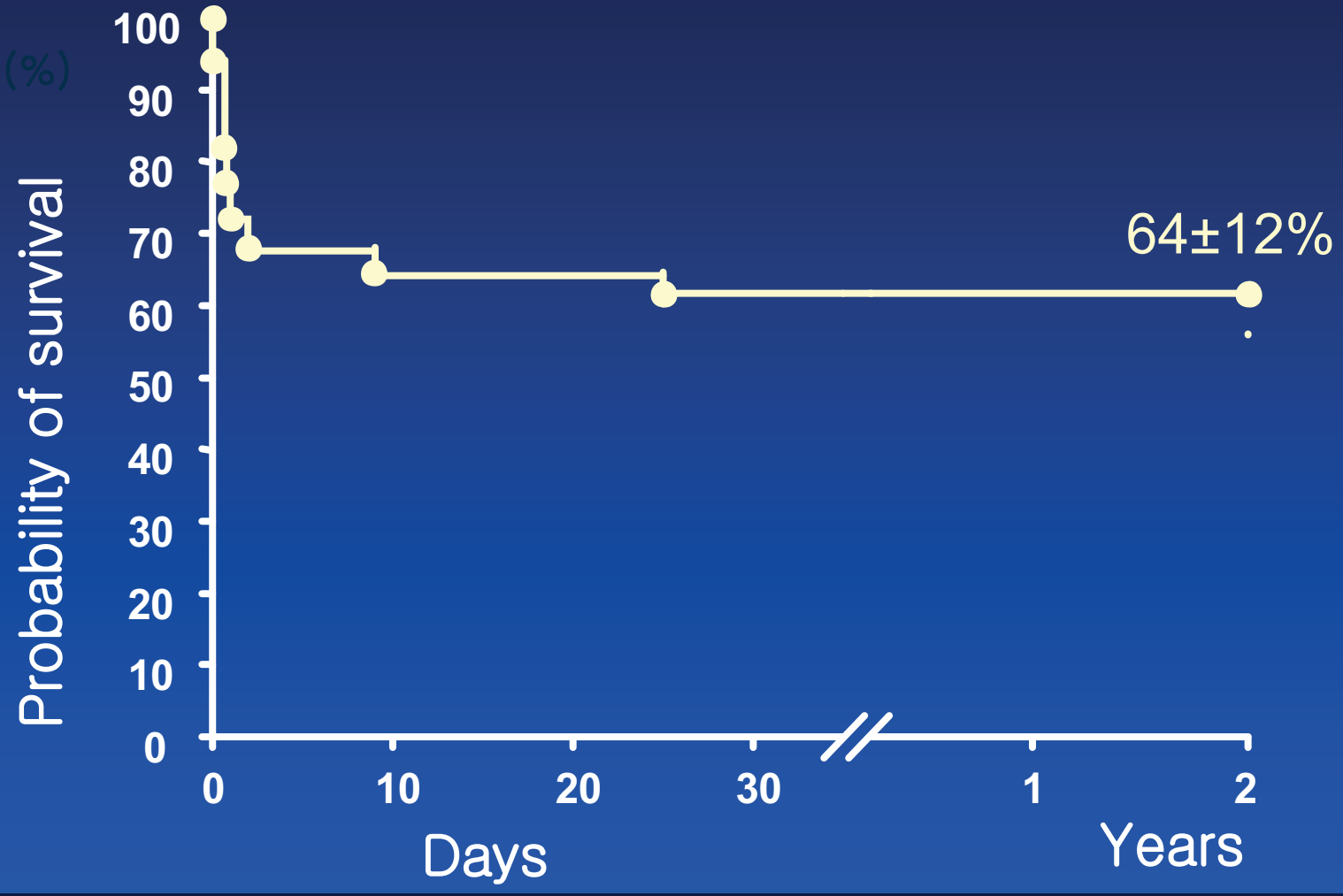
  : suboptimal angiographic outcome with TIMI 1 flow (heavy calcification)

Long-term clinical outcomes

	N=22
Follow-Up (Months)	25±30
TLR(CABG)	1 (4.5%)
Reinfarction	0
Death	0

Primary LMCA Stenting

3-year Death free survival



Prognostic determinants

	Alive (n=13)	Dead (n=9)
Initial TIMI ≥2	10(77%)	1(11%)*
Dominant RCA	3(23%)	4(44%)
Collaterals ≥2	1(8%)	1(11%)
Final TIMI flow =3	12(92%)	4(44%) *
Cardiogeic shock	9(69%)	9(100%)

* p<0.05

Conclusion

- Primary stenting of left main during AMI is technically feasible and appropriate therapeutic option
- Good pre- (≥2) & post-intervention antegrade flow (≥3) is significant predictors of survival
- Long term clinical outcomes of patients Surviving to hospital discharge was favorable