

European Bifurcation Club
26-27 September 2008 –
PRAGUE

How to do an SKS

Julian Gunn

Sheffield University

Sheffield Teaching Hospitals

UK

European Bifurcation Club

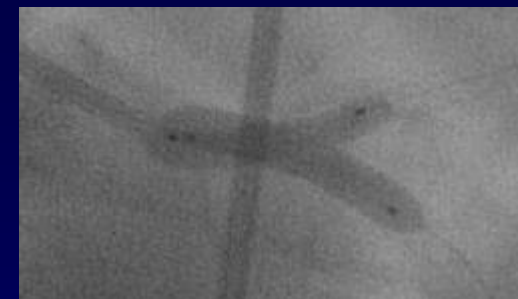




Sheffield



SKS in coronary arteries: the literature – 1 of 3



'Kissing' stents for bifurcational coronary lesion.

Colombo A et al. *Cathet Cardiovasc Diagn* 1993;30:327-30

Kissing Palmaz-Schatz stents for coronary bifurcation stenoses.

Teirstein P. *Cathet Cardiovasc Diagn*. 1996;37:314-6

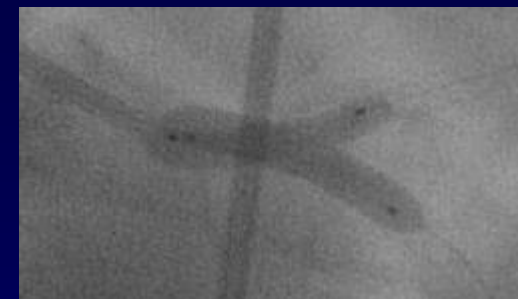
Simultaneous kissing stents (SKS) technique for treating bifurcation lesions in medium-to-large size coronary arteries. Sharma SK et al. *Am J Cardiol* 2004;94:913-7

	SKS	Provisional T	
N	100	100	
30d MACE	3	9	(p=0.07)
TLR (>6m)	5%	18%	(p=0.007)
Death	2	2	

Simultaneous kissing drug-eluting stent technique for percutaneous treatment of bifurcation lesions in large-size vessels. Sharma SK. *Cathet Cardiovasc Interv* 2005;65:10-6

N	200
30d MACE	5%
9m TLR	4%

SKS in coronary arteries: the literature – 2 of 3



Comparison of simple and complex stenting techniques in the treatment of unprotected left main coronary artery bifurcation stenosis. Kim et al. *Am J Cardiol* 2006;97:1597-601

	Simple	Complex	[SKS	crush]
n	67	49	[24	25]
Angio success	100%	100%		
Angio restenosis	5%	24%	[25%	24%]
FU 18m death/ MI	0	0		
TLR	0	12%		

Incomplete stent apposition in a left main bifurcated lesion after kissing stent implantation. Murasato Y et al. *J Invasive Cardiol* 2006;18:E279-84

Three-dimensional modeling of double-stent techniques at the left main coronary artery Bifurcation using micro-focus X-ray computed tomography. Murasato Y et al. *Cathet Cardiovasc Interv* 2007;70:211-20

Simultaneous kissing stent technique to treat left main stem bifurcation disease. Morton AC et al. *Cathet Cardiovasc Interv* 2007;69:209-15

SKS in coronary arteries: the literature – 3 of 3



Long-term outcome of simultaneous kissing stent technique with sirolimus-eluting stent for large Bifurcation coronary lesions. Kim et al. *Cathet Cardiovasc Interv* 2007;70:840-6

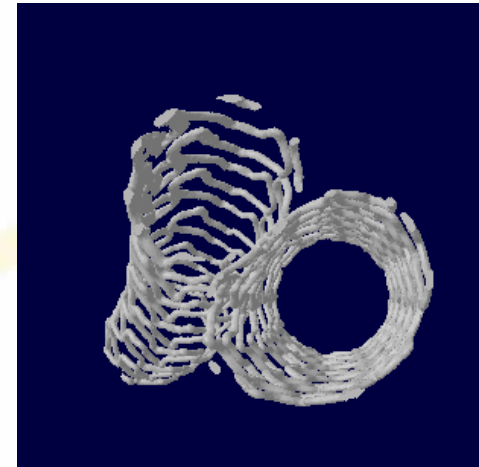
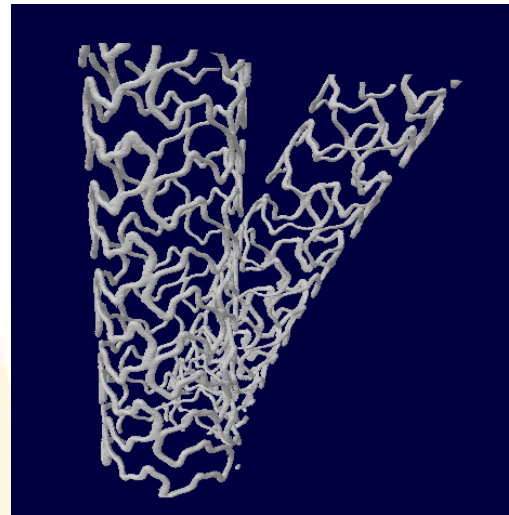
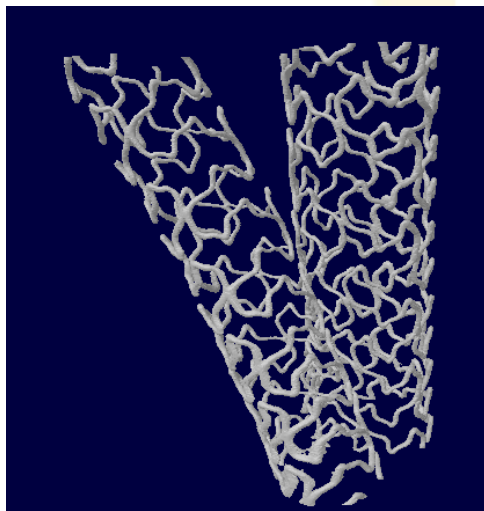
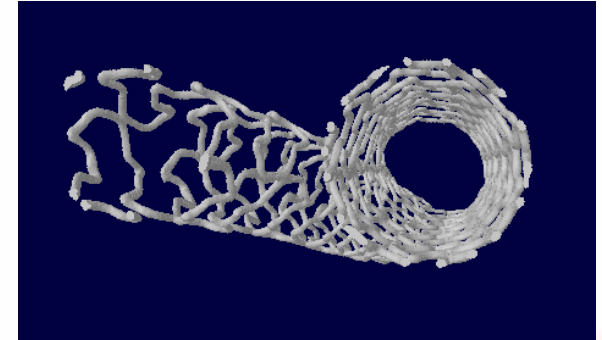
LMS 29, LAD 7

Angio success 100%

26m f/u: no death, MI, stent thrombosis

Angio restenosis in 5/30 (17%) ['membranous diaphragm' in 14 (14%)]

TLR 5 (14%)



Brown A, Morton A, Gunn J. 2008 *In submission*

SKS for UMLCA bifurcation: Sheffield results: Sept 09

- N= 141
- All-comers (shock/ AMI/ v elderly/ frail)
- 1 PCI turndown →
- 42 % unsuitable for CABG
- Mean age 67 (SD10)
- 75% male
- 11% emergency, 24% acute, 65% elective
- 2.0 vessel disease (+ULMCA)
- 1.9 vessels treated (+ULMCA)



SKS for UMLCA bifurcation: Sheffield results

- 98.6% SKS technical success
- 96% DES, 4% BMS
- 6% IVUS
- 18% IABP
- Followup: median 29 (IQR 17-37) months
- Deaths: 19/141 = 13.5%

	Dead	Alive	
– NY score median	7.1	0.6	(p=0.003)
– Urgent or emergency	12/19	37/122	(p=0.008)
– IABP	8/19	18/122	(p=0.009)
– Other vessels PCI	1.6	1.9	(p=0.18)

SKS for UMLCA bifurcation: Sheffield deaths

All but 2*/141 had successful PCI (98.6%), but:

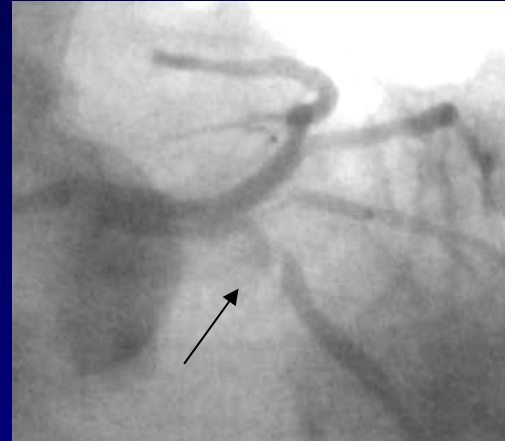
5/15 emergency cases died at day 4, day 6, day 7, day 7
and 1m

7/34 urgent cases died at day 0*, day 1, day 2, 4m, 6m and
6-12m, 6-12m (*LMS rupture)

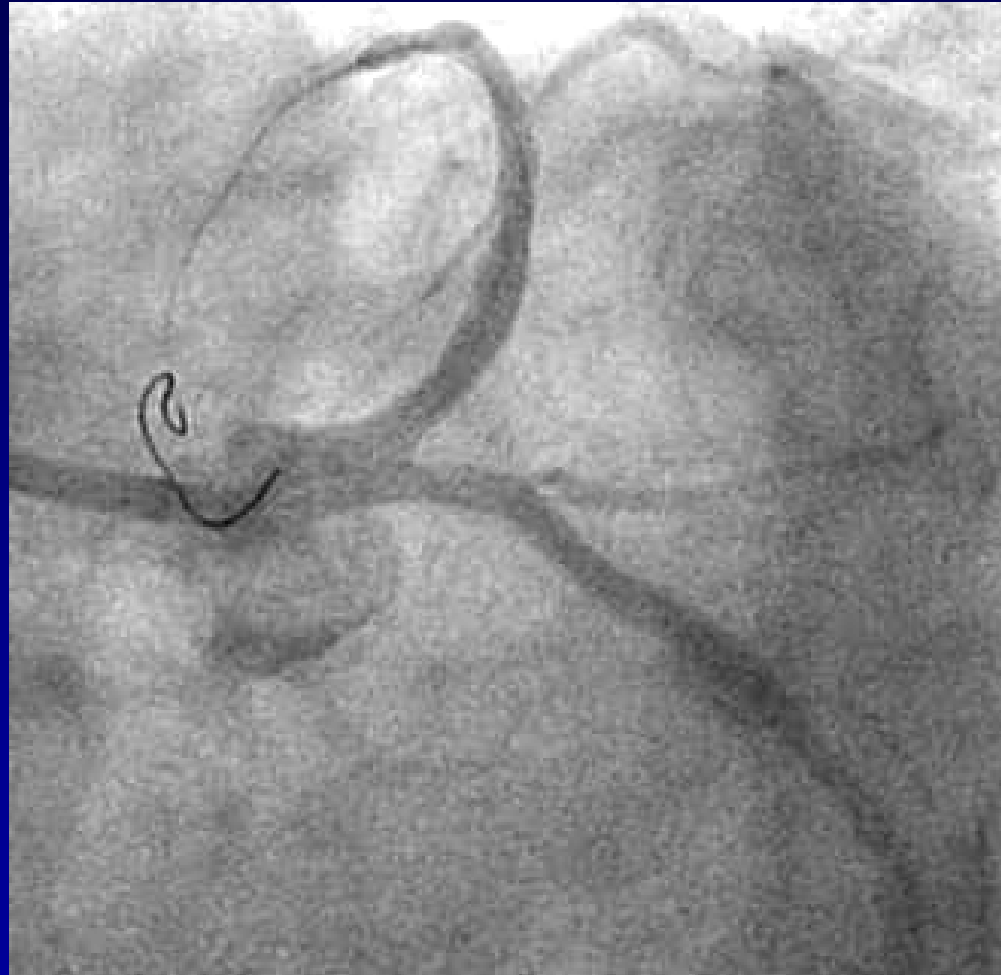
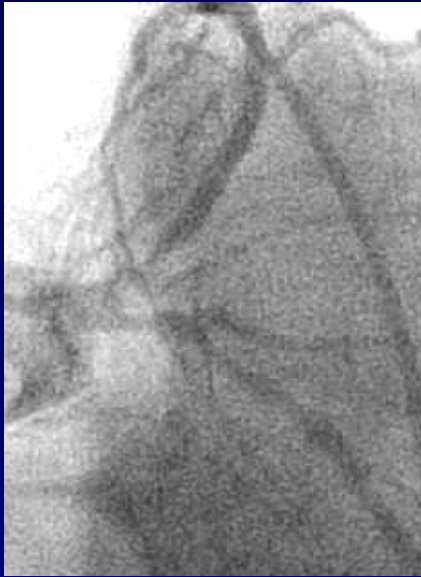
7/92 elective cases died at day 0*, day 5, 3m, 3m, 6m,
10m, 24m (*patient in extremis)

SKS for ULMCA bifurcation Sheffield TVR

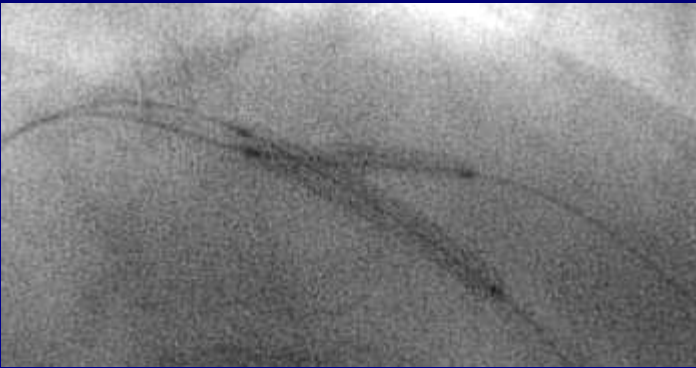
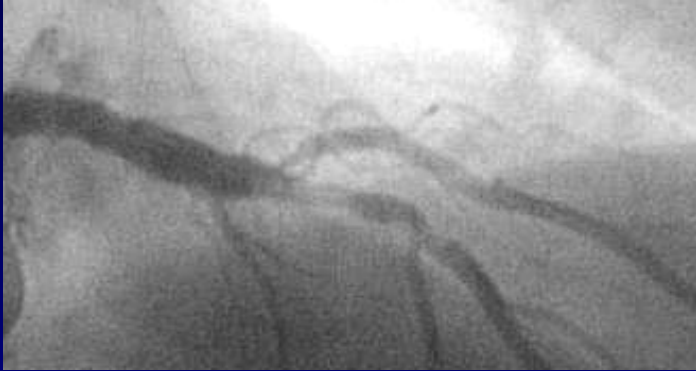
- 8/141 (5.7%)
- Symptom-driven
- 7 re-PCI
- 1 CABG



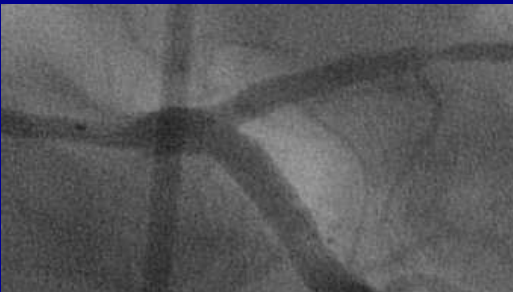
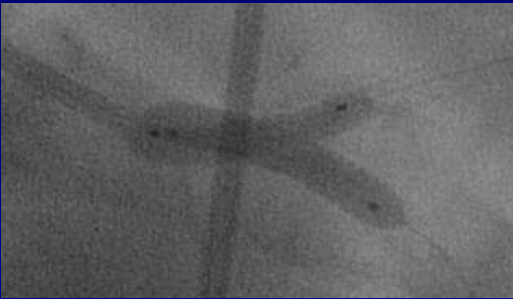
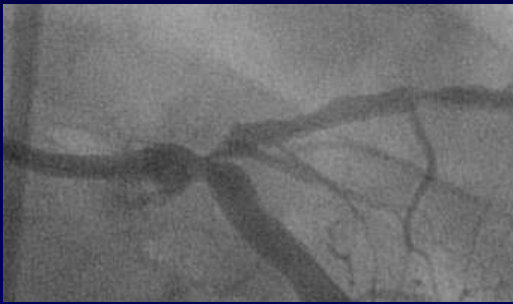
SKS: LMS



SKS: LAD/D1



SKS: techniques/ tips (LMS): summary



- 8F catheter: Voda/EBU
- Generous predilatation
- Taxus stents
- Spider and LAO Cranial
- Magnify
- Cover all disease
- Cover ostium
- Balloon for length
- 1:1 diameter LAD/ Cx
- Advance and pull back
- HP: 16atm
- Postdilate NC HP
- Lifetime dual antiplatelet?
- Clopidogrel testing?