Left Main Longitudinal Stent Distortion: Clinical and RX diagnosis

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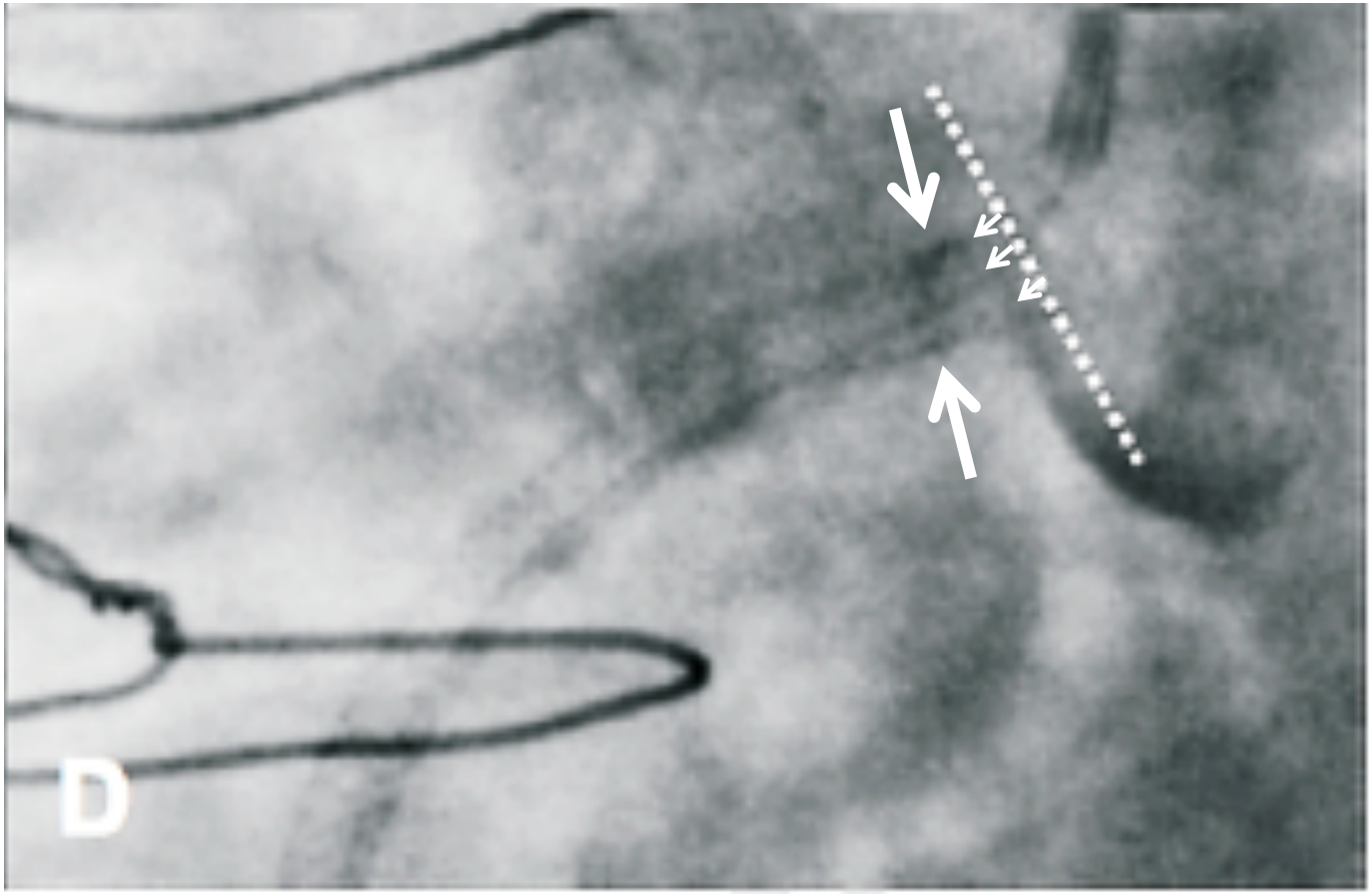
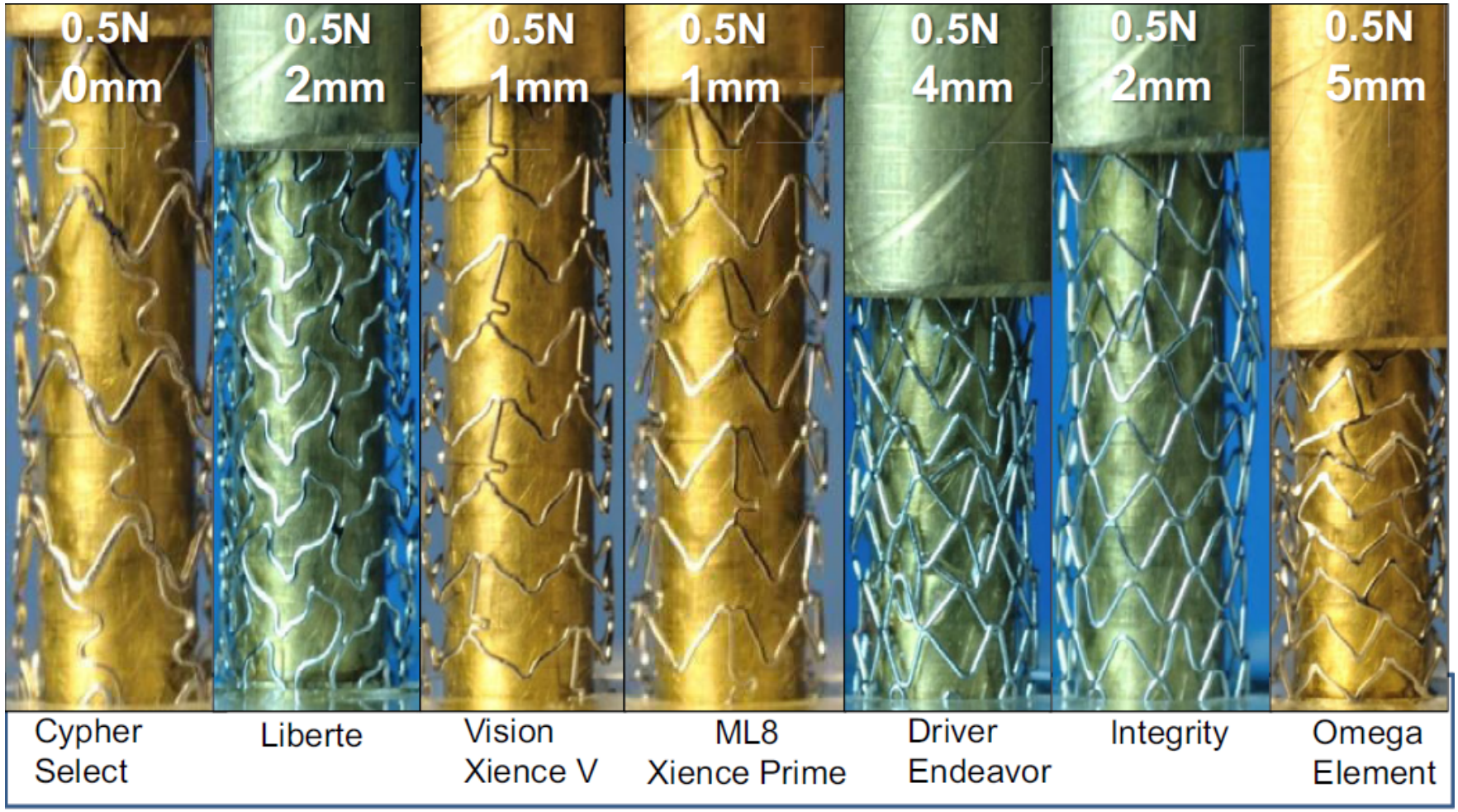
Longitudinal compression: a "new" complication with modern coronary stent platforms – time to think beyond deliverability?



Hanratty EuroIntervention 2011;7:872-877

Stent Longitudinal Integrity
Bench Insights Into a Clinical Problem

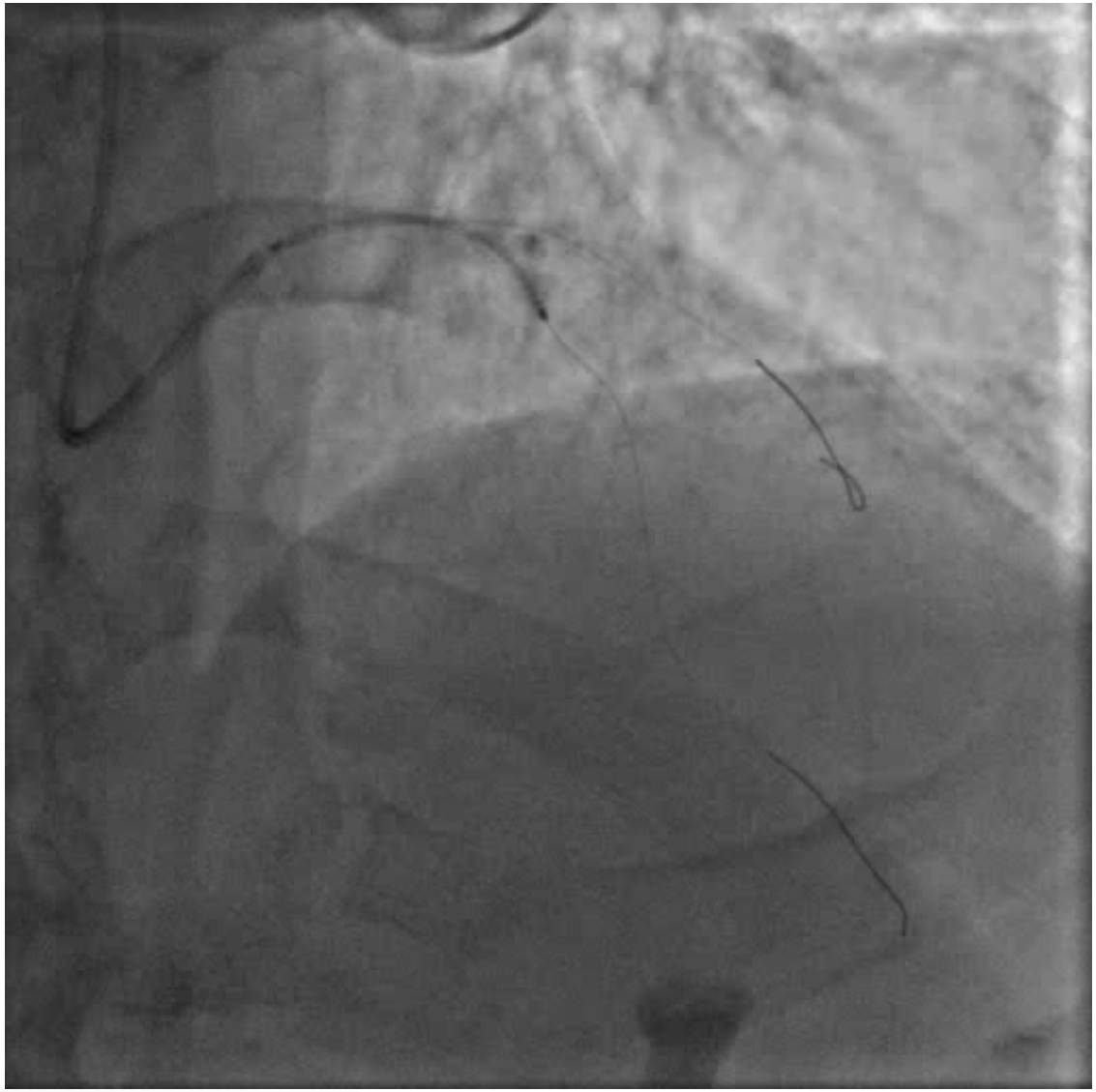


Comparative Stent Longitudinal Shortening and Distortion With 0.5 N Compressing Force

Ormiston, J Am Coll Cardiol Intv 2011;4:1310 –7

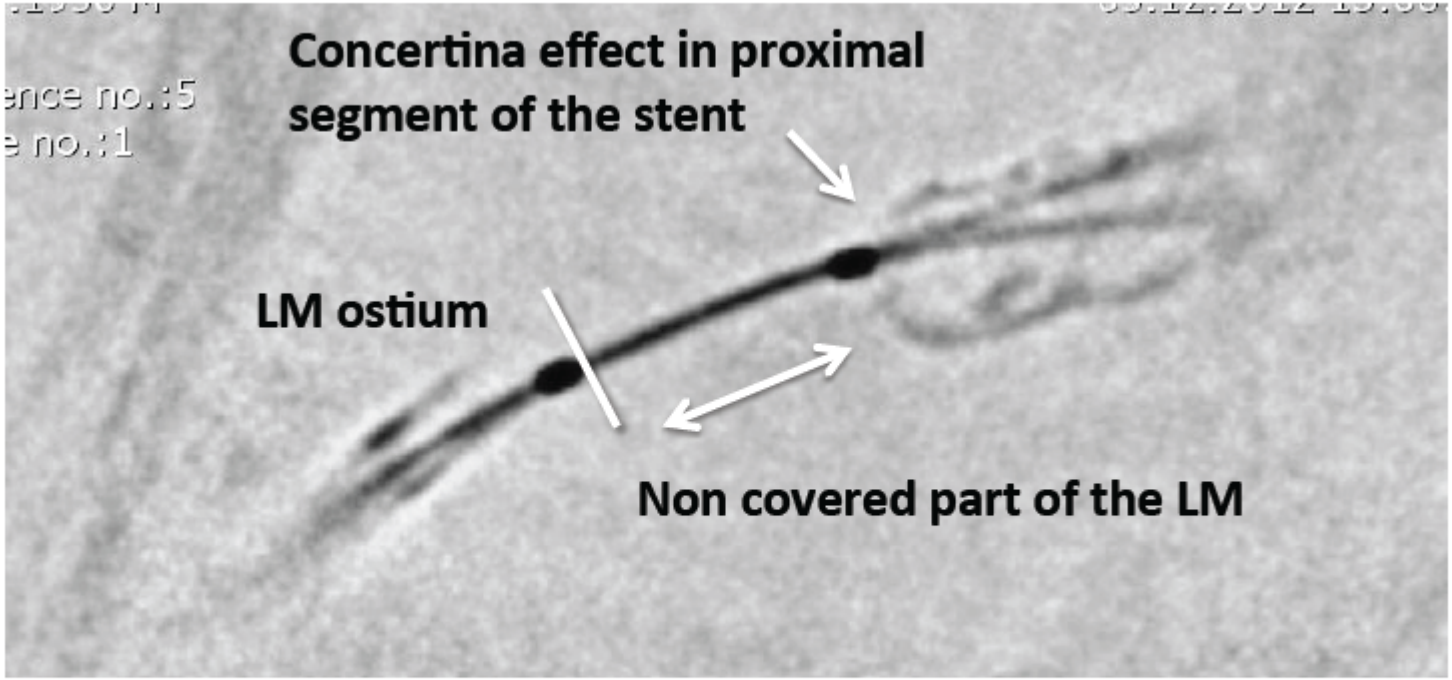
LM longitudinal stent distorsion (1)

2012
Presented at
PCR 2013



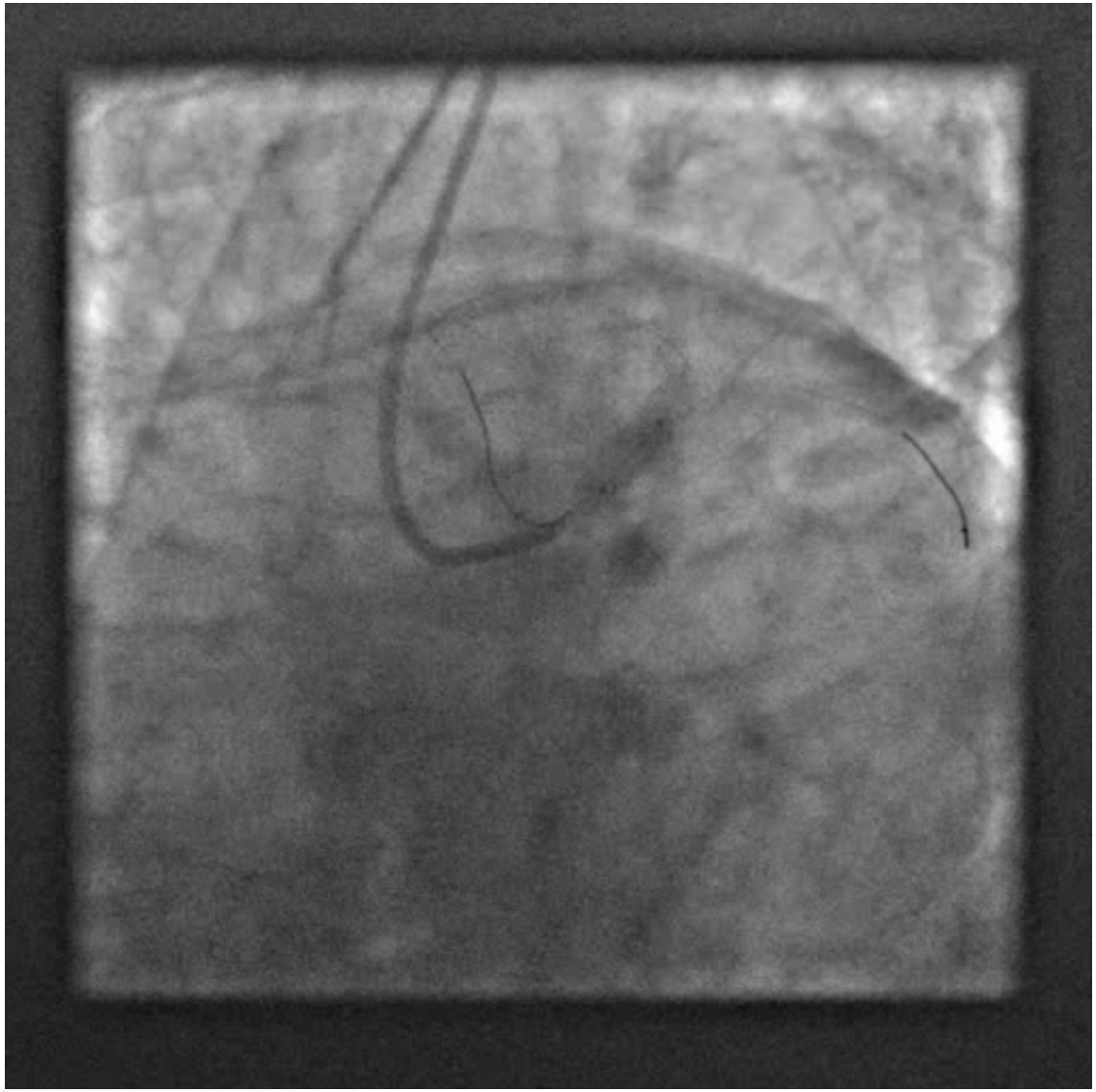
Xience V

LM longitudinal stent distorsion (1)

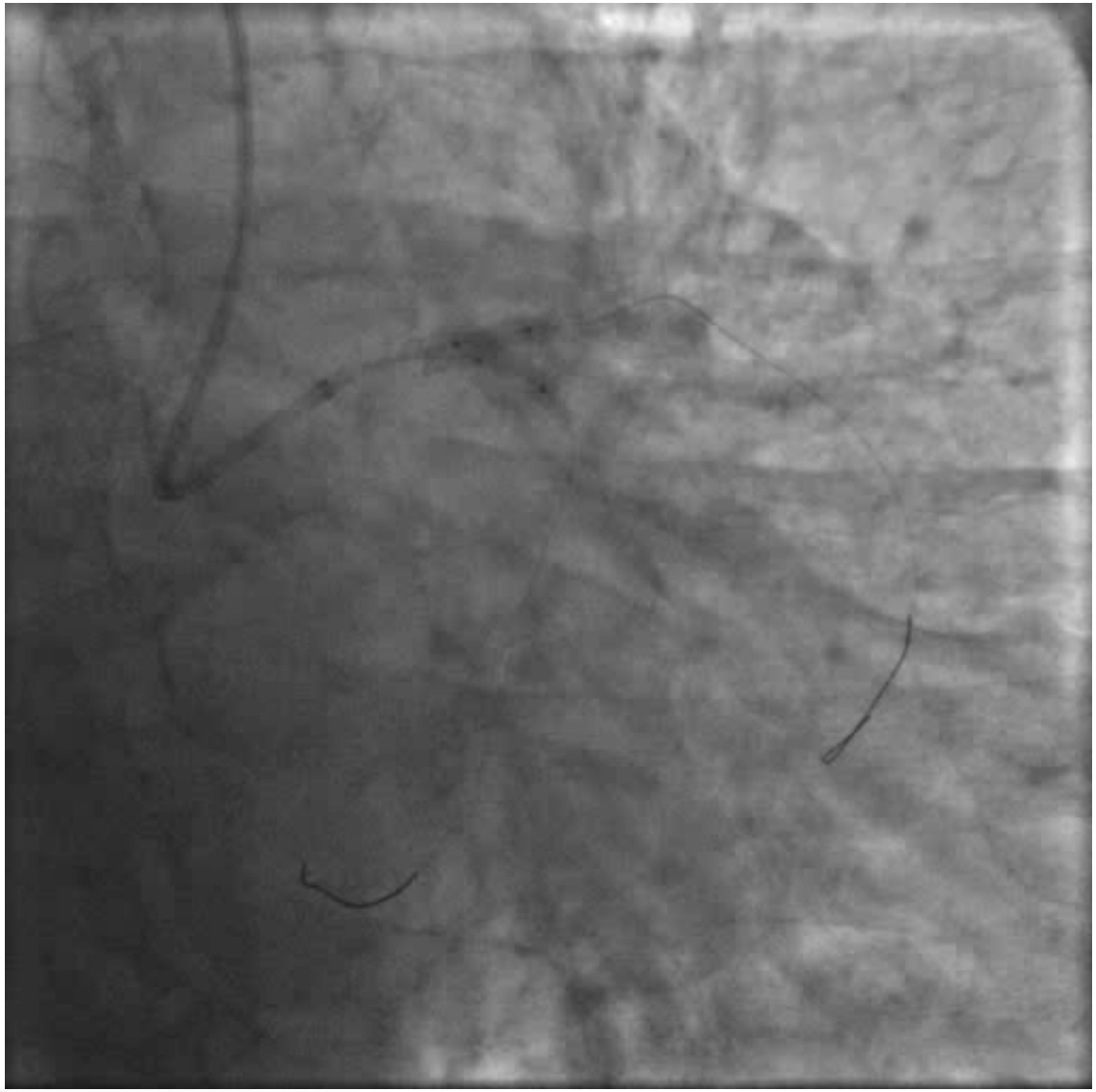


- Stent Viz (General Electrics) evidenced a shortening of the stent with a disrupted portion in its proximal edge.

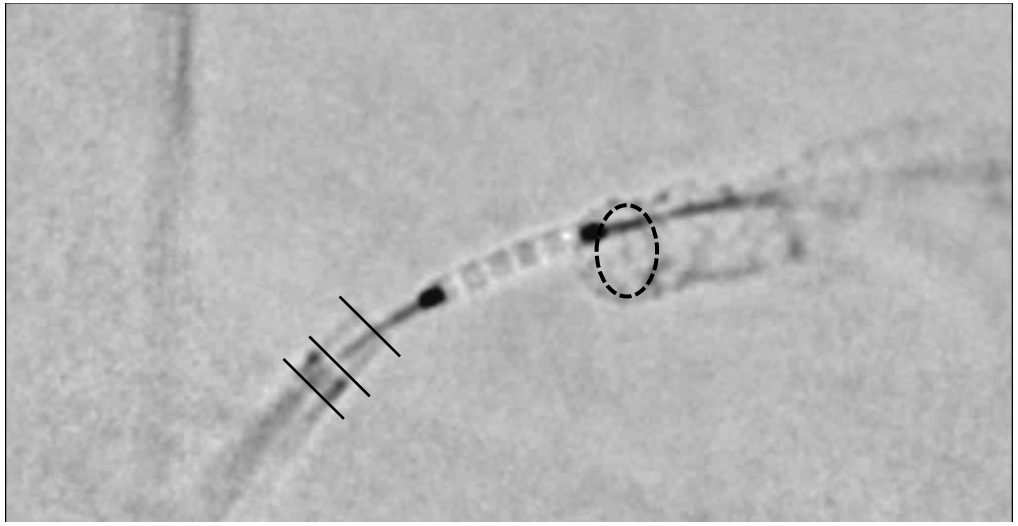
LM longitudinal stent distorsion (1)

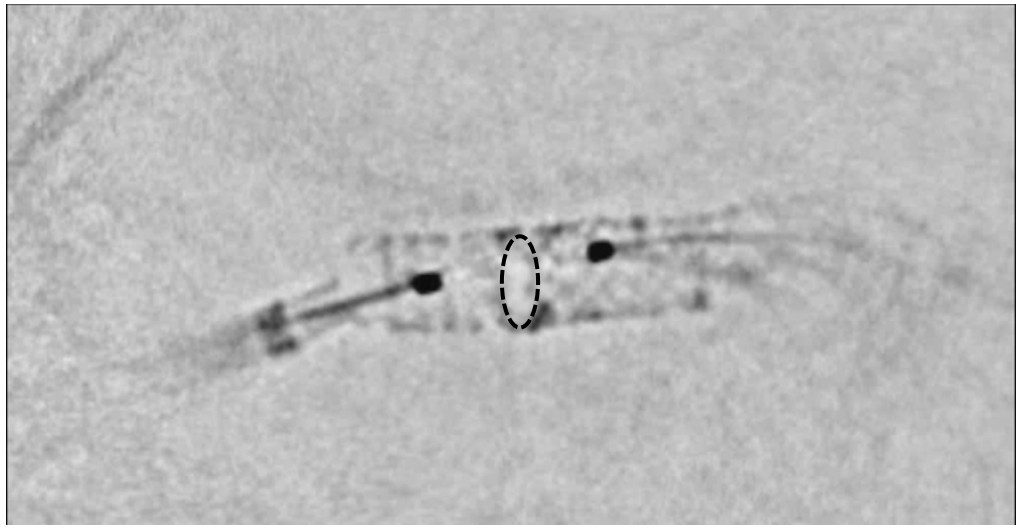


LM longitudinal stent distorsion (1)



LM longitudinal stent distorsion (1)





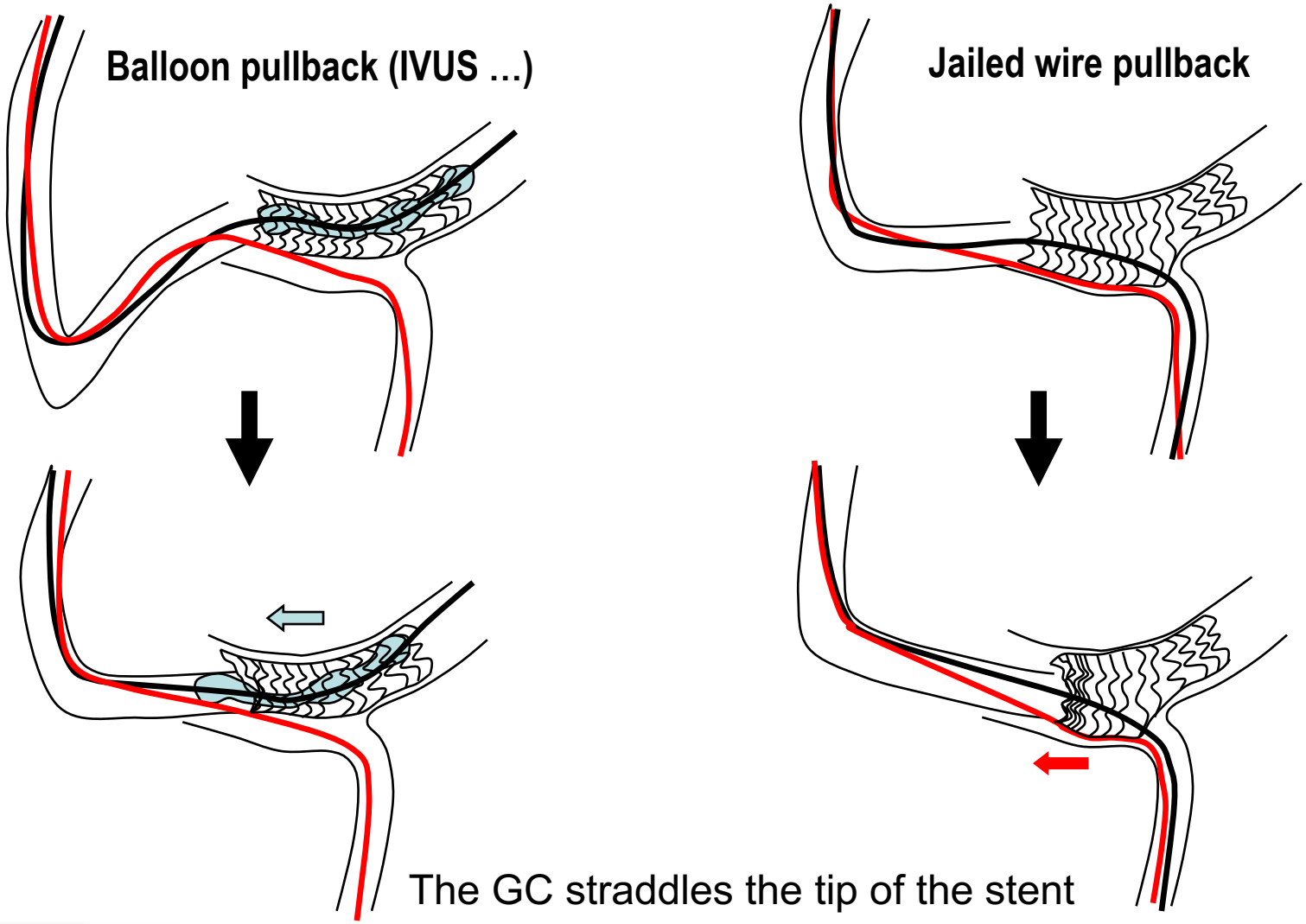
Lateral
« concertina »

Clinical and Rx diagnosis

- **Ostial/proximal** lesion (but can occur in proximal LAD/Diag lesion)
- **Jaided wire**
- **Guiding / stent conflict** (the marker is not at the tip of the catheter)
- **Difficulty to recross** the crossover stent, even with a small balloon
- Stent is **shorten**, **displaced** (elongated), **dense radio-opaque spots** in the area of the stent (visible with X-Ray, better with **stent enhancement**)

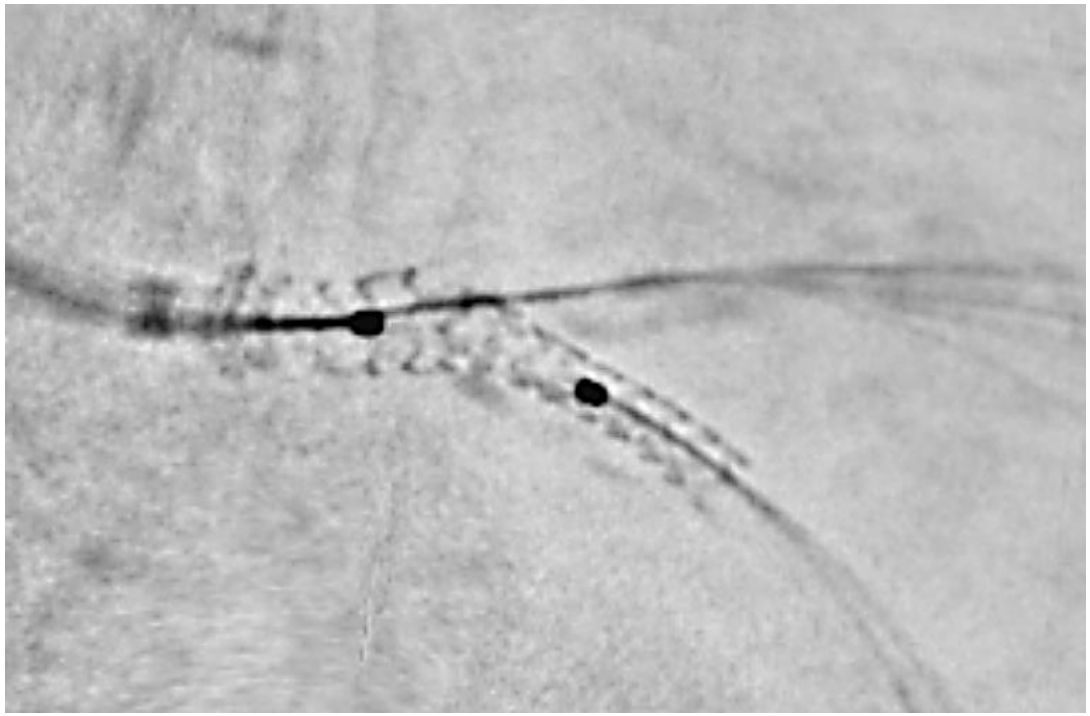
Stent longitudinal distorsion

Conflict with guiding catheter



The GC straddles the tip of the stent

LM longitudinal stent distorsion (2)



Stent longitudinal deformation in Left Main stenting

Follow-up results in LSD and non-LSD patients

FU (526,6 days)	LSD patients (n=12)(5.2%) Number (%)	non- LSD patients (n=217) Number (%)
In-stent restenosis	2 (16,7)	20 (9,2)
TVR	3 (25)	15 (6,9)
TLR	2 (16,7)	14 (6,5)
Hospital death	0	4 (1,8)
All cause death	1 (8,3)	5 (2,3)
Definite ST	0	2 (0,9)
Possible ST	1 (8,3)	2 (0,9)
MI	-	0

Ieva Briede, unpublished