

# Outcome of Stent for CHD Other than CoA

Tomita H  
Showa University Northern Yokohama Hospital

# Limitations of balloon dilation

- Limited efficacy for late (5 years or more) postoperative lesion .
- High risk for acute postoperative lesion.
- Elastic , stretched, or compressed lesion may recoil easily even if the waist disappeared completely following balloon dilation.
- Limited efficacy for long segment stenosis.
- Restenosis.
- Intimal dissection may cause acute occlusion.

# AHA Scientific Statement 2011; Indications for Cardiac Catheterization and Intervention in Pediatric Cardiac Disease

- Recommendations for Pulmonary Angioplasty

*Class I*




1. Pulmonary angioplasty is indicated for the treatment of significant peripheral branch pulmonary artery stenosis (see text for definition of “significant” stenosis) or for pulmonary artery stenosis in very small patients in whom primary stent implantation is not an option (*Level of Evidence: B*).

- Recommendations for Pulmonary Artery Stent Placement

*Class I*

1. Primary intravascular stent implantation is indicated for the treatment of significant proximal or distal branch pulmonary artery stenosis when the vessel/patient is large enough to accommodate a stent that is capable of being dilated to the adult diameter of that vessel (*Level of Evidence: B*).

# Currently available stents for congenital heart diseases in Japan

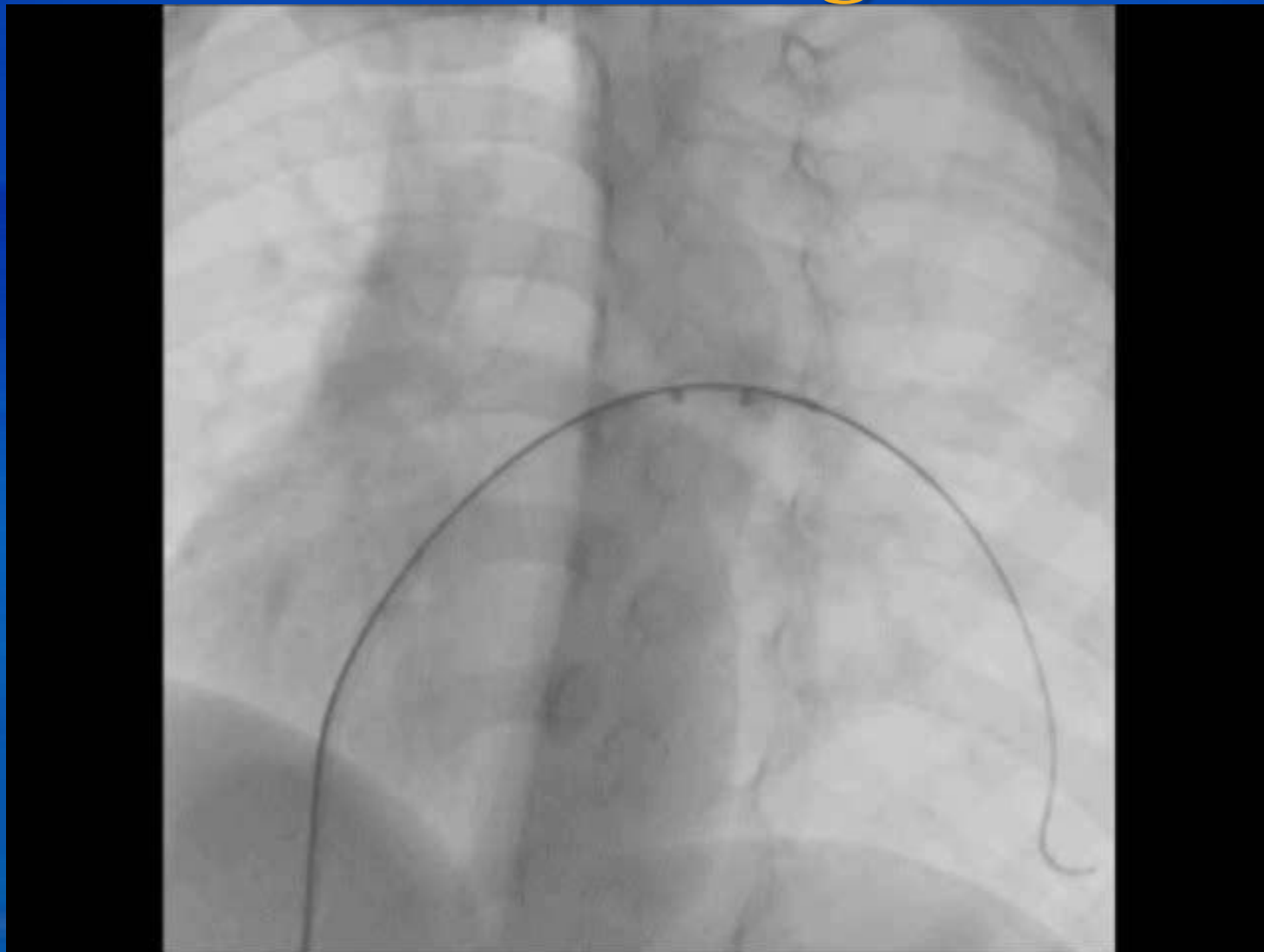
		Max $\emptyset$	Length	Guide wire	Sheath
	Medium	10-12	10,15,20,29,39	035"	7F
	Large	15-18	18, 30	035"	9F
	XL	25	40	035"	11,13F
	Renal	5.5-7.5	15, 18	014"	4, 5F
	Medium on Amia	7.5	15,18	018"	5F
	on Opta	9	15,18	035"	6F
	Large	11	19,29	035"	7F
	SD	6-8	14-19	014"	5, 6F
	LD	9	17,27,37,57	035"	6F
		11	25,37,57	035"	7F

**\* All stents are off-label**

# Delivery system

- Except for Palmaz XL, all balloon expandable stents are pre-mounted in Japan, however, these occasionally need to be re-mounted on the appropriate size balloon, like PowerFlex, Z-MED II, or BIB.
- Long sheath should be usually 2F bigger than the delivery balloon. We commonly use following long sheath for large old Palmaz.
  - Cook Blue sheath: 8F/85cm, 9, (10), 11, 12F/75cm, 14F/30cm
  - Brite Tip : 9F/55cm
  - Super Arrow Flex: 9F/65, 80, 100cm, 10F/45, 65, 80cm
- Guide wire  
Following stiff guide wires are necessary for stenting.
  - 035", 038": Amplatz Super Stiff (Boston) , Amplatz Extra Stiff Whisker / Amplatz Ultra Stiff (Cook), Radifocus Stiff (Terumo) for old Palmaz , Genesis large, and Express Vascular LD.
  - 014": Platinum PLUS (180cm, Boston), Dejavu (180cm, 300cm, Cordis), or 018": SV (180cm, 300cm, Cordis), Platinum PLUS (180cm, 260cm, Boston) for Genesis medium or Express vascular SD.

# Conventional Stenting for LPS



# Half-way front loading method



# JPIC stent survey

May, 1995- Feb, 2009

## ● PS

- 199 patients, 253 lesions, 225 sessions
- Age at stenting ; 0-56 (median10) years
- F/U interval ; 0.5-12 (2) years

## ● CoA

- 35 patients, 38 lesions, 36 sessions
- Age at stenting ; 0-31 (14) years
- F/U interval ; 0.5-10(2) years

## ● SIVC

- 21 patients, 21 lesions, 21 sessions
- Age at stenting ; 0-39 (7) years
- F/U interval ; 0.5—8(1.5) years



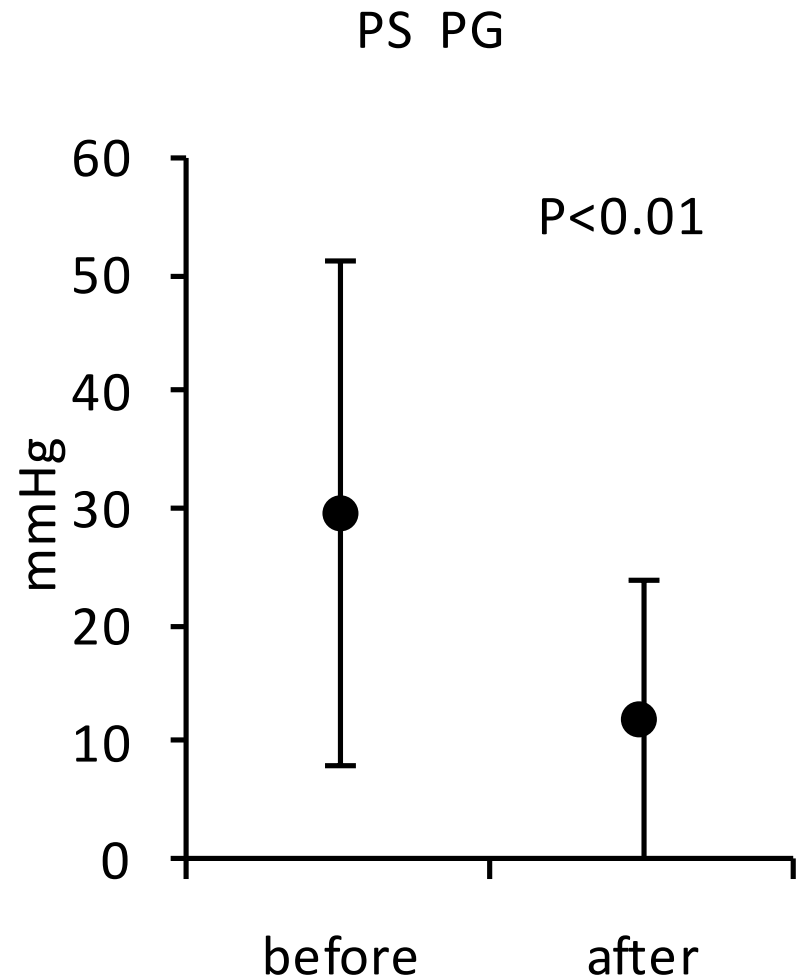
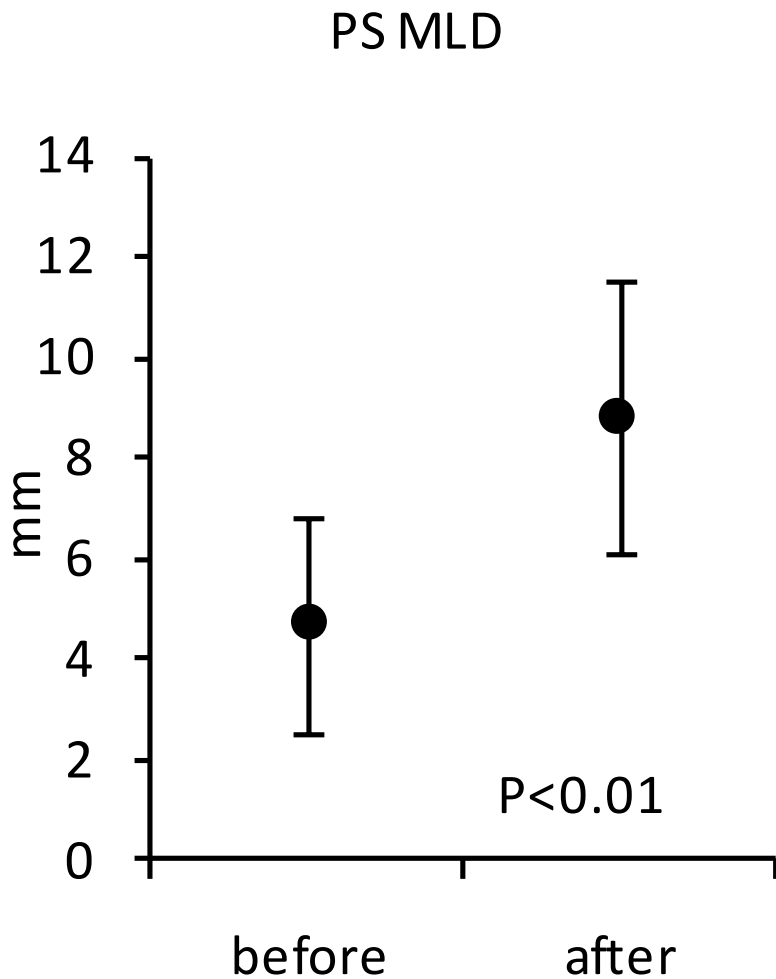
# Used stent in JPIC stent survey

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	PS	SIVC
<b>Palmaz medium</b>	46	5
<b>Palmaz large</b>	199	13
<b>Palmaz extra-large</b>	10	1
<b>Palmaz (Unidentified)</b>	9	1
<b>Genesis medium on Slalom</b>	9	1
<b>Genesis large</b>	14	0
<b>Genesis (Unidentified)</b>	1	0

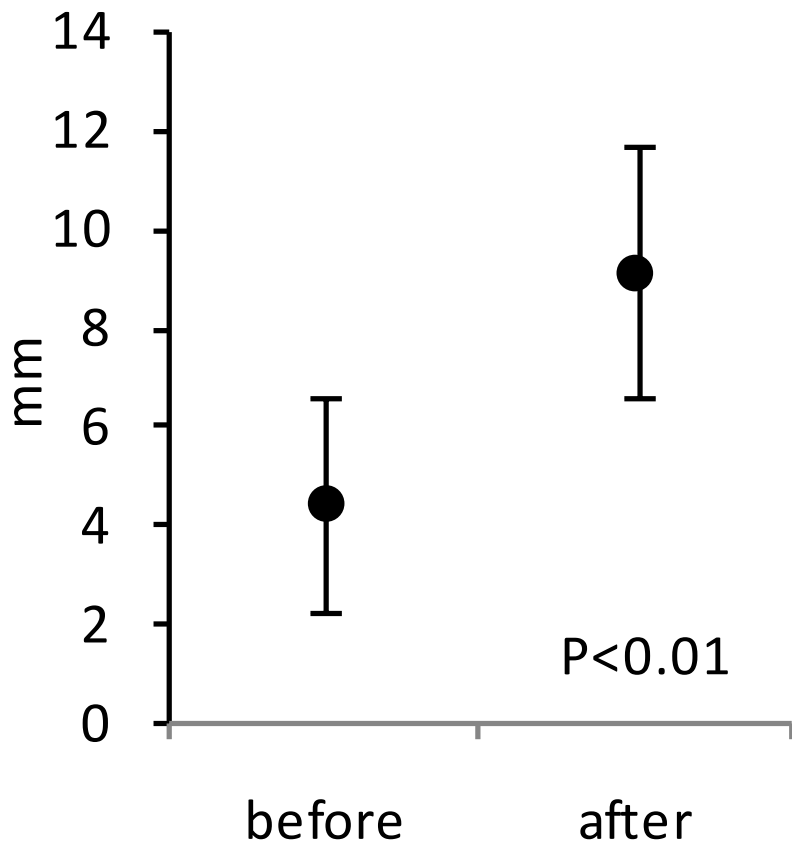
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# PS acute outcome

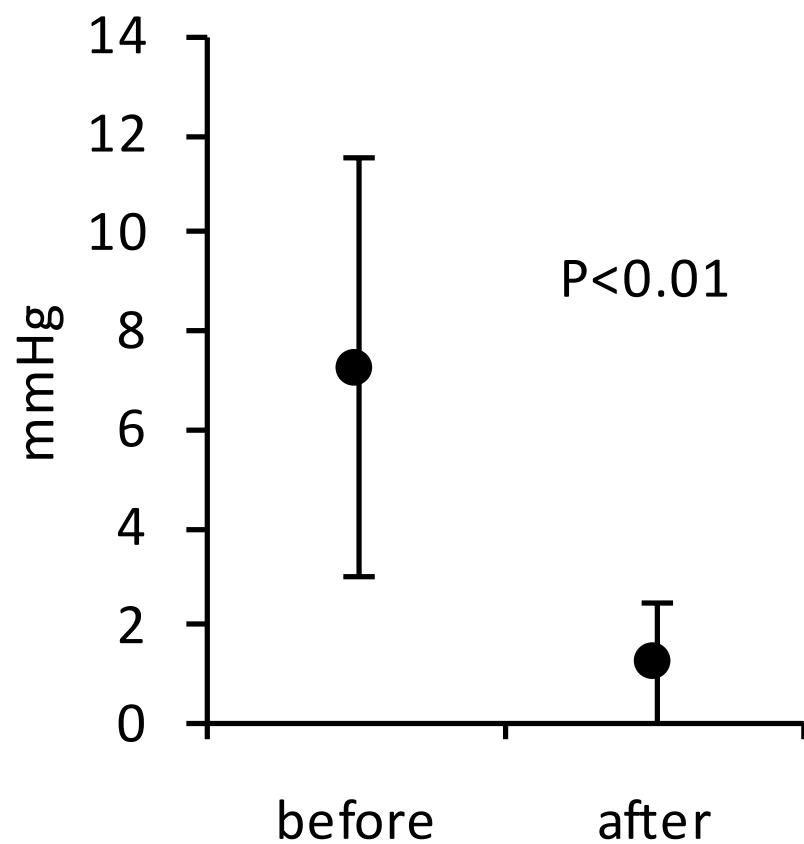


# SIVC acute outcome

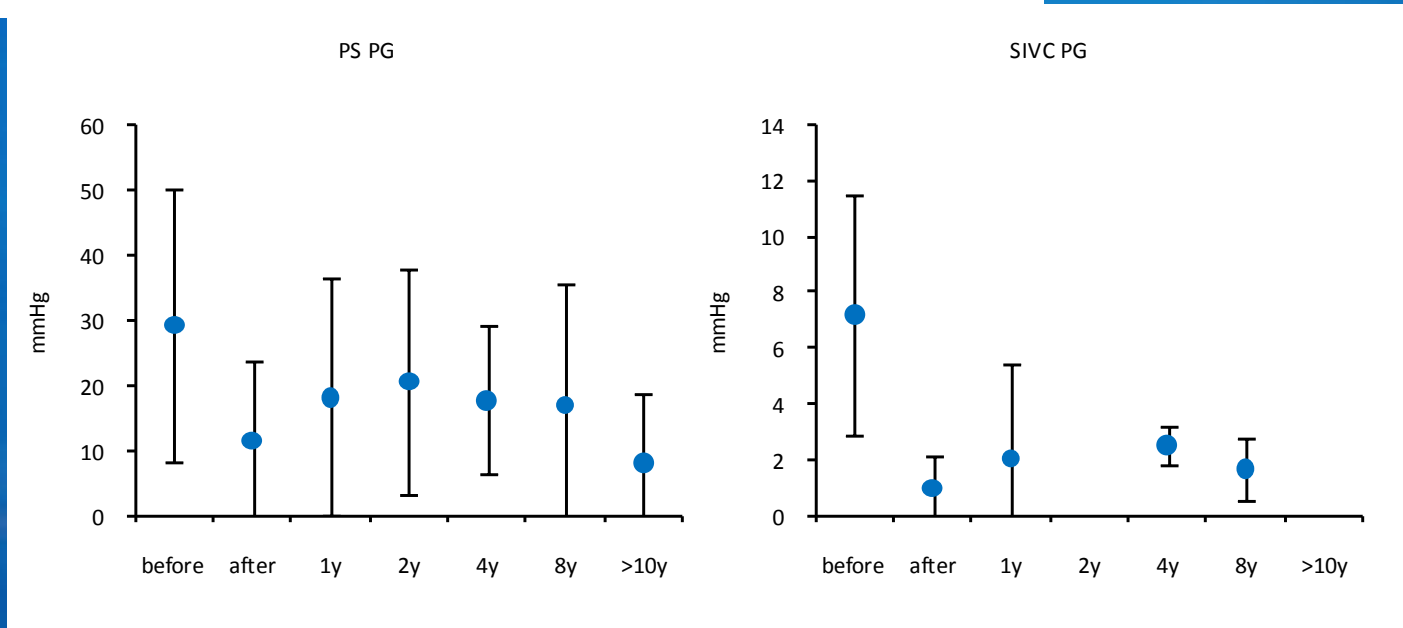
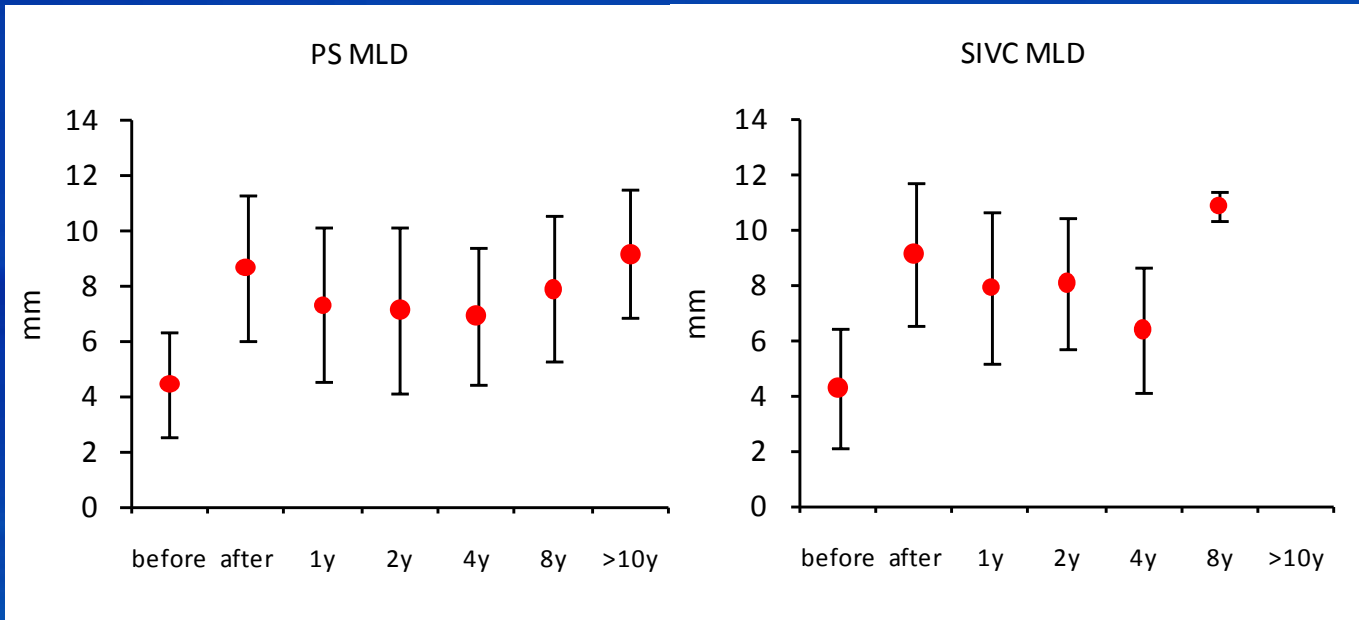
SIVC MLD



SIVC PG



# MLD and PG F/U outcome



# Event free

