

Child-in-Mother catheter use in Complex coronary intervention

[Purpose] Child-in-Mother catheter can increase support for challenging coronary intervention, and was emerging in recent years. We aim to examine the success rate and safety of child-in-mother catheter use to facilitate complex coronary intervention.

[Methods] Retrospective analysis of cases in 2011/11~2015/5 with child-in-mother catheter (Guideliner, or Heartrail ST-01 catheter) use for percutaneous coronary intervention.

[Results] Total case numbers were 119 (Guideliner: 106, ST01: 13). Procedural success rate was 86.6%. Most reason to use Child-in-Mother catheter was calcification, tortuous, and chronic total occlusion(CTO) (n=61, 49, and 29 respectively). Type A, B, and C lesions were 1.7%, 32.8%, and 65.5% respectively. The complication rate was 7.6% (6 dissection, 1 thrombus formation, 1 stent dislodge, and 1 perforation). All can be solved successfully and no procedural related mortality occurred. The failure rate is relatively high in lesions containing 3 or more out of 6 characteristics: long lesion, tortuous lesion, calcification, CTO, previous intervention history, and proximal stent deposition.

[Conclusion] Child-in-Mother catheter to facilitate challenging complex coronary intervention is safe and has a high success rate.

Character	Types	Number	Percentage(n/119)
Target Vessel	LAD	24	20.2%
	LCX	21	17.6%
	RCA	74	62.2%
Child catheter	Guideliner 7Fr	26	21.8%
	Guideliner 6Fr	75	63.0%
	Guideliner 5.5Fr	5	4.2%
	ST01	13	10.9%
Lesion Types	A	2	1.7%
	B	39	32.8%
	C	78	65.5%
Vessel Size	2.0~3.0	52	43.7%
	3.0~4.0	63	52.9%
	>4.0	4	3.4%
Access Site	Radial	25	21.0%
	Femoral	94	79.0%
CTO		29	24.4%