



Cardiac Center
KING CHULALONGKORN MEMORIAL HOSPITAL
THE THAI RED CROSS SOCIETY

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“How to Prevent Complications in PCI”

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ESC/EACTS 2010 Guidelines on Myocardial Revascularization

	CABG	PCI
1VD or 2VD, non proximal LAD	IIb C	I C
1VD or 2VD, proximal LAD	IA	IIa B
3VD and SYNTAX score ≤ 22	IA	IIa B
3VD and SYNTAX score > 22	IA	III A

Table 3. Revascularization to Improve Symptoms With Significant Anatomic ($\geq 50\%$ Left Main or $\geq 70\%$ Non-Left Main) or Physiological ($\text{FFR} \leq 0.80$) Coronary Artery Stenoses

Clinical Setting	COR	LOE
≥ 1 significant stenoses amenable to revascularization and unacceptable angina despite GDMT	I—CABG I—PCI	A
≥ 1 significant stenoses and unacceptable angina in whom GDMT cannot be implemented because of medication contraindications, adverse effects, or patient preferences	IIa—CABG IIa—PCI	C
Previous CABG with ≥ 1 significant stenoses associated with ischemia and unacceptable angina despite GDMT	IIa—PCI IIb—CABG	C C
Complex 3-vessel CAD (eg, SYNTAX score >22) with or without involvement of the proximal LAD artery and a good candidate for CABG	IIa—CABG preferred over PCI	B
Viable ischemic myocardium that is perfused by coronary arteries that are not amenable to grafting	IIb—TMR as an adjunct to CABG	B
No anatomic or physiologic criteria for revascularization	III: Harm—CABG III: Harm—PCI	C

Benefit of Complex PCI Intervention



If you want to do complex cases without complications

- Know your equipments
- Know your lesion(s)
- Know the techniques
- Know & ready to manage complications
- Know your limits !!

Know your equipments

- Review of Cath Lab inventory - do you have everything you need on the shelf and in the room?
- Guiding catheter(s):
 - To have good back up support: passive & active
- Guide wires:
 - Workhorse guide wire
 - Special guide wires
- Special equipments: Microcatheters, Rotablator, laser, guideliner/gidezilla,, etc.
- Balloons, cutting balloon, perfusiion ballon
- Stents: BMS, DES, BVS, stent graft

Know your lesions

- Sufficient baseline angiographic images of the entire coronary artery anatomy
- Deliberate planning of the primary technical approach
 - Anatomic considerations & functional assessment
 - IVUS/OCT, FFR, CTA
 - Non-coronary variables
 - renal function
 - prior attempts
 - overall health of the patient
- Contingency planning if Plan A fails

Know the techniques

- Techniques to have good back up
 - Guiding selection & how to manipulate guiding
 - Mother & child, guideliner/guidezilla
 - Anchoring technique
- Guide wire selection & wire handling
- Special techniques:
 - Bifurcation & LM
 - CTO
 - Calcified, diffuse

Know & ready to manage complications and also how to avoid!!

- Access site complication
- Dissection
- Perforation
- No flow phenomenon
- Stent thrombosis, thrombus
- Special complications:
 - Wire fracture
 - Trapped rota burr, tornus catheter
 - Etc.

Know your limits

- Stopping rules - x-ray dose and contrast volume
- Do your best for patients, not for yourself
- Know yourself!! If you don't have enough experience, call for help or send to another doctor
- Avoid “ See one, Do one, Teach one”

Summary

- When cases are selected properly, complications are low
- Technical factors can be mastered with time & experiences
- Prevention is the key
- Complications in PCI “What can happen, It will happen”

Thank you

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