

## Completeness of Revascularization: Mini-Bypass (MinBP) versus Conventional Extracorporeal Circulation (cECC)

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### Objectives:

The goal of coronary artery surgery (CABG) is complete revascularization at lowest risk and morbidity. This study compares MinBP versus cECC with respect to completeness of revascularization.

### Methods:

A total of a 120 patients were randomized and treated with CABG using either Maquet, Sorin, Medtronic or Terumo MinBP or cECC systems of the same company. Patient characteristics, x-clamp time, total bypass time, number of distal anastomoses and priming volumes were evaluated.

### Results:

There was no operative mortality or conversion of MinBP to cECC. Groups matched with respect to patient characteristics (age, gender) and operation times. The priming volume was significantly lower with MinBP. In all instances a still heart could be achieved.

Parameter	MECC ®	cECC	ECC.O	cECC	Resting h. cECC	Roc-Safe cECC		
n	20	20	20	20	20	20	20	20
Age (yrs)	66,3 (53-82)	61,6 (45-84)	68,9 (48-92)	61,6 (45-84)	66,9 (55-84)	69,4 (43-83)	68,5 (57-81)	67,2 (51-86)
Gender	17/3 m/f	16/4 m/f	14/6 m/f	14/6 m/f	15/5 m/f	14/6 m/f	16/4 m/f	16/4 m/f
x-clamp (min)	42 (28-63)	38 (22-65)	42 (20-76)	44 (19-67)	39 (27-66)	39 (19-60)	41 (25-60)	42 (20-56)
Bypass-time (min)	72 (48-72)	69 (45-100)	72,2 (46-102)	66 (40-100)	68 (41-95)	68 (34-107)	77 (48-111)	73 (49-131)
No. of distal anastomoses	3,6 (2-6)	3,9 (3-6)	4,1(2-6)	3,5 (2-5)	4,0 (2-6)	4,2(2-6)	4,5(2-6)	4,5(2-7)
Priming (ml)	750	2100	680	2200	1400	2150	800	2100

### Conclusions:

MinBP like cECC provides a still heart allowing complete revascularization without increase of bypass and x-clamp time.