

Supplementary Data

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Supplementary eTable 1. Preoperative baseline- and exercise data according to the categorisation of SBP response.

	SBP response to exercise at CPET1		
	Normal >0.25mmHg/Watt	Flat ≤0.25mmHg/Watt	Drop <0 mmHg/Watt
Numbers (n)	18	23	4
Gender (Male/female)	11/7	15/8	2/2
Age (years)	64.5 ± 8.6	66.9 ± 9.0	71.5 ± 7.1
Height (cm)	174 ± 11	172 ± 9	167 ± 13
Weight (kg)	84 ± 14	83 ± 13	76 ± 14
BMI (kg × m ⁻²)	27.8 ± 4.7	28.0 ± 3.5	27.2 ± 2.0
Hb (g × L ⁻¹) ^a	144 ± 9	143 ± 9	143 ± 8
LVEF (%)	60 ± 8	58 ± 4	58 ± 2
AoV _{max} (m/s)	4.6 ± 0.4	4.6 ± 0.6	4.6 ± 0.3
AVA (cm ²)	0.73 ± 0.18	0.69 ± 0.23	0.70 ± 0.20
Hypertension ^b (n, %)	13 (72%)	9 (39%)	3 (75%)
Beta-blocker (n, %)	5 (28%)	5 (22%)	1 (25%)
ACE-Inhibitor or ARB (n, %)	6 (33%)	3 (13%)	1 (25%)
SBP _{supine} (mmHg)	134 ± 17	136 ± 18	145 ± 6
DBP _{supine} (mmHg)	76 ± 8	81 ± 10	70 ± 8
HR at rest (beat × min ⁻¹)	68 ± 11	67 ± 10	69 ± 15
SBP at rest ^{***} (mmHg)	137 ± 16	139 ± 19	144 ± 11
SBP _{ss} (mmHg)	158 ± 19	155 ± 23	176 ± 19
Respiratory exchange ratio	1.15 ± 0.08	1.14 ± 0.07	1.11 ± 0.12
Maximal HR (beat × min ⁻¹)	137 ± 23	136 ± 18	133 ± 14
Maximal workload (Watts)	132 ± 43	130 ± 42	109 ± 51
Maximal SBP (mmHg)	186 ± 27	173 ± 22	198 ± 26
Maximal SBP of predicted ^c (%)	93 ± 12	85 ± 9	99 ± 11
Delta SBP ^c	49 ± 26	34 ± 19	54 ± 24
SBP/Watt-slope	0.35 ± 0.23	0.21 ± 0.13	0.11 ± 0.31
SBP/Watt-slope % of predicted ^c (%)	93 ± 11	86 ± 9	99 ± 11
Rating of maximal perceived exertion	17 ± 2	17 ± 1	16 ± 1
Rating of maximal chest pain	0.2 ± 0.8	0.17 ± 0.65	0.75 ± 0.96
Rating of maximal dyspnoea	6 ± 2	6 ± 2	4 ± 3

Baseline- and exercise data on 45 patients performing preoperative cardiopulmonary exercise tests according to the categorisation of SBP response. Data are presented on all patients, regardless of completed follow-up measurement or respiratory exchange ratio. Data presented as Mean ± SD (continuous data) or as n (percentage) for categorical data. ^aOne missing data, n=44. ^bHypertension defined as antihypertensive medication and/or a clinical diagnosis. ^cMissing SBP at rest replaced by SBP-supine minus 4mmHg for nine patients preoperatively.

ACE, angiotensin-converting enzyme; ARB, angiotensin II receptor blocker; AoV_{max}, peak systolic velocity over the aortic valve; AVA, aortic valve area; BMI, body mass index; CPET, cardiopulmonary exercise testing; DBP, diastolic blood pressure; Hb, haemoglobin; HR, heart rate; LVEF, left ventricular ejection fraction; SBP, systolic blood pressure.

Supplementary eTable 2. Detailed preoperative baseline- and exercise data for patients categorised as “drops” in systolic blood pressure.

	Patients categorised as “drop” in SBP during CPET1			
	A	B	C	D
Gender	Female	Female	Male	Male
Age (years)	Early 70s	Late 60s	Early 80s	Early 70s
Height (cm)	162	151	172	182
Weight (kg)	70	64	73	97
BMI (kg × m ⁻²)	26.7	28.1	24.7	29.3
Hb (g × L ⁻¹)	135	137	148	150
LVEF (%)	56	56	61	57
AVA (cm ²)	0.5	* ^a	0.9	0.7
AoVmax (m/s)	4.5	4.9	4.3	4.6
SBP at rest (mmHg)	140	140	135	160
Respiratory exchange ratio	1.20	0.97	1.19	1.06
Maximal HR (beat × min ⁻¹)	146	118	125	144
Maximal Workload (Watts)	109	40	159	129
Maximal SBP (mmHg)	200	170	210	220
Maximal SBP of predicted (%)	95	80	100	99
SBP/Watt-slope	0.39	* ^a	* ^a	0.36
SBP/Watt-slope % of predicted (%)	69	* ^a	* ^a	76
Reason for termination of exercise test	Leg fatigue	Blood pressure reaction	Blood pressure reaction	Pathological ECG response
SBP Drop (mmHg)	-10	-15	-20	-5
SBP Drop @ SBP (mmHg)	200	170	210	220
SBP Drop @ Watt	91	20	148	102
SBP Drop @ time (minutes)	10:10	3:01	14:51	10:18
SBP Drop @ RER	1.10	0.95	1.09	1.00

Detailed descriptions of four subjects (A-D) categorised as “drops” in systolic blood pressure during preoperative CPET. ^aIndicates missing data.

AoVmax, peak systolic velocity over the aortic valve; AVA, aortic valve area; BMI, body mass index; CPET, cardiopulmonary exercise testing; ECG, electrocardiogram; Hb, haemoglobin; HR, heart rate; LVEF, left ventricular ejection fraction; SBP, systolic blood pressure; RER, respiratory exchange ratio.