Flow Diagram

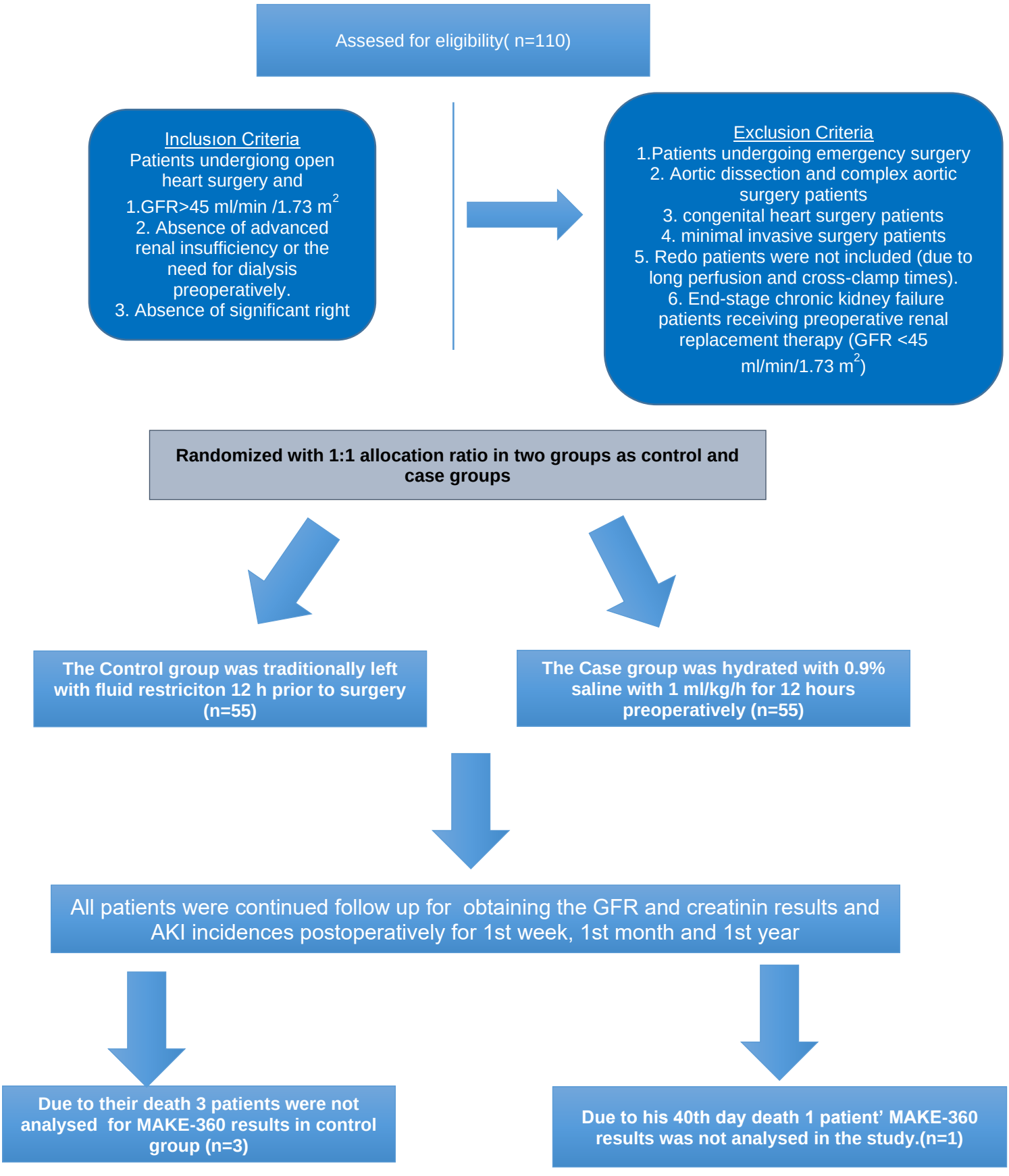

Table 1a: Distribution and Comparison of Preoperative Baseline Characteristics (*BSA:body surface area, BMI: body mass index, , COPD: Chronic obstructive pulmonary disease. PAD: peripheral arterial disease, GIS: gastrointestinal system)*

Variable		Control Group (n=55)	Case Group (n=55)	P value*
Age		59,38±8,332(39-78)	57,54±9,441(40-76)	*0,284*
Gender	Female	46(%83,6)	41(%74,6)	
	Male	9(%16,4)	14(%25,4)	
BSA (m^2)		1,9558±1,8802(1,54-2,47)	2,6786±5,10813(1,61-40,2)	*0,090*
BMI (kg/m^2)		28,7909±4,62154(22-43)	29,8193±6,04266(20,8-44,6)	*0,078*
DM		*34(%61,8)*	*39(%70,9)*	*0,423*
HT		*34(%61,8)*	*40(%72,7)*	*0,223*
PAD		*7(%12,7)*	*4(%7,3)*	*0,34*
COPD		*10(%18,2)*	*13(%23,6)*	*0,165*
Cerebrovascular event		*4(%7,3)*	*5(%9,1)*	*0,50*
GIS diseases		*5(%9,1)*	*1(%1,8)*	*0,206*
AKI history		*1(%1,8)*	*0*	*1*
Thyroid dysfunction		*3(%5,5)*	*5(%9,1)*	*0,716*

Table 1b . Distribution and Comparison of Preoperative Baseline Laboratory Values between Case and Control Groups

Variables	Case Group (n=55)	Control Group (n=55)	P value
PREOP WBC	8324,81±2522,16 (4400-15900)	8042,65±2719,54(4900-12700)	**0,984**
PREOP HTC	40,68±5,98 (25,9-53,6)	40,29±4,0 (29,3-49,3)	**0,201**
PREOP HGB	13,58±2,14 (8,2-17,7)	13,55±1,38(10,1-16,7)	**0,429**
PREOP RBC	4,67±0,60 (2,93-5,89)	4,65±0,50 (3,37-5,90)	**0,397**
PREOP PLT	245772,25±64626,07 (146000-415000)	236594,49 ±87613,62 (139000-416000)	**0,953**
PREOP INR	1,04±0,08 (0,83-1,27)	1,06±0,10 (0,89-1,43)	**0,418**
PREOP GLUCOSE(mg/dl)	153,82±66,6 (80-342)	159,34±74,3 (81-383)	**0,894**
PREOP UREA(mg/dl	35,7925±10,85 (19-65)	37,06±14,5 (19-123)	**0,988**
PREOP CREATININE(mg/dl)	0,90±0,24 (0,47-1,67)	0,83±0,17 (0,51-1,25)	**0,132**
PREOP GFR(ml/min/1.73 m^2)	87,03±19,9 (46-124)	91,7±15,22 (49-117)	**0,168**
PREOP POTASSIUM(mmol/L)	4,39±0,44 (3,5-5,34)	4,34±0,35 (3,62-5,21)	**0,416**
PREOP SODIUM(mmol/L)	138,2±2,69 (133-144)	137,83±2,62 (131-145)	**0,666**
PREOP ALBUMIN(g/L)	41,66±4,66 (28-51)	40,67±3,64 (32-48)	**0,175**
PREOP CRP(mg/L)	11,90±18,34 (0,93-85)	14,70±26,04 (0,53-148)	**0,379**
PREOP TROPONIN(ng/ml)	0,17±0,54 (0,001-3,72)	0,16±0,44 (0,001-0,44)	**0,593**

(CRP:C-Reactive Protein, HGB:Hemoglobin, HTC: Hemotocrit, INR:International Normalized Ratio, RBC: Red Blood Cell, WBC:White Blood Cell, PLT:Platelet)

Table 2: Comparison of Intraoperative Data and Surgical Types between the Two Groups *(CABG:Coronary Artery Bypass Graft)*

VARIABLES	**Case Group (n=55)**	**Control Group (n=55)**	**p value**
ISOLATED CABG	52(%94,5)	51(%92,7)	**0,7**
ISOLATED VALVE	2(%3,63)	3(%5,45)	**1**
CABG + VALVE	1(%1,8)	1(%1,8)	**1**
CROSS CLAMPING TIME	67,07±29,2 (17-153)	68,67±28,3 (21-166)	**0,77**
TOTAL PERFUSION TIME	111,5±40,67 (50-225)	114,85±34,7 (52-206)	**0,643**
TOTAL OPERATION TIME	272,57±62,8 (134-425)	265,7±56,63 (138-395)	**0,546**
TOTAL URINE OUTPUT	1324±516,4 (600-3200)	1292±485,7 (480-2170)	**0,735**
TOTAL FLUID BALANCE	1255,36±856,8 (-320-(+3350))	1058,36±690,15 (-20-(+3200))	**0,233**

PRIMARY OUTCOMES

Table 3: Comparison of Blood Gas Values in the First 24 Hours

Variables	**Case group (n=55)**	**Control group (n=55)**	**p value**
Lactate (mmol/L)	3,02±1,35(1.2-6)	3,89±2,05(0.7-13)	***0,016***
pH	7,39±0,37(7,35-7,48)	7,36±0,19(7-7,51)	**0,389**
Potassium level (mmol/L)	4,1±0,49(3,1-5)	4,12±0,46(3,1-5,2)	**0,981**
Sodium level (mmol/L)	140,45±2,92(132-146)	140,76±3,89(131-153)	**0,628**
Chloride level (mmol/L)	114,18±2,9(105-120)	114,58±3,3(108-123)	**0,209**
Bicarbonate level (mmol/L)	22,03±1,46(18-25,2)	21,52±1,38(18,3-24,3)	**0,632**

Table 4: Comparison of Complications and the Need for Cardiac and Renal Medical or Mechanical Support between the Hydration Group and the Control Group in the First 24 Postoperative Hours

Variables	**Case Group (n=55)**	**Control group (n=55)**	**P value**
Arrhythmia	7(%12.7)	11(%20)	**0,303**
Revision for bleeding	0(%0)	2(%3,6)	**0,248**
Renal dose dopamine application	12(%21,8)	12(%21,8)	**1**
Furosemide application	13(%23,6)	16(%29,1)	**0,516**
Inotrope requirement	8(%14,5)	13(%23,6)	**0,225**
MCS(IABP)	2(%3,6)	3(%5,5)	**0,647**
MCS(AV ECMO)	0(%0))	1(%1,8)	**1**
MCS(VVECMO)	1(%1,8)	0(%0)	**1**

(AV ECMO;arteriovenosus extracorporeal membrane oxygenator , MCS ;Mechanic circulatory support,IABP;Intraaortic Baloon Pump , VV ECMO;veno-venous ekstracorporeal membrane oxygenator system)

Table 5. Comparison of peroperative and postoperative serum creatinine values in two groups

	Case group (n=55)	**Control group (n=55)**	**P value**
Preoperative serum creatinine(mg/dl)	**0,91±0,25 (0,47-1,67)**	**0,83±0,17 (0,51-1,25)**	**0,130**
Postop 1st day sCre	0,99±0,31 (0,50-1,91)	0,87**±0,25 (0,51-1,52)**	**0,060**
Postop 7th day sCre	0,88±0,35 (0,34-2,62)	0,87±0,49 (0,48-4)	**0,654**
Postop 30th day sCre	0,92±0,34 (0,42-2,67)	0,84±0,15 (0,58-1,35)	**0,113**
Postop 360th day sCre	0,90±0,31 (0,4-2,61)	0,87±0,16 (0,60-1,41)	**0,953**

Table 6. Comparison of Urine Outputs (cc/kg/h) and Total Urine Output in the First 24 Hours between the Two Groups

Urine output	**Control group (n=55)**	**Case group (n=55)**	**P value**
0-12h (ml/kg/H)	*1,27±1,03*	*1,34±1,07(0.27-6)*	*0,337*
12-24 h (ml/kg/H)	*1,05±0,69*	*1,15±1,02(0.21-6.25)*	*0,763*
24-36h (ml/kg/H)	*0,99±0,46*	*1,16±0,59(0.28-3,5)*	*0,269*
36-48 h (ml/kg/H)	*1,05±0.48(0-3,8)*	*1,17±0,65(0,25-3,57)*	*0,443*
Total 24 hours (ml)	*3033±988(1540-6700)*	*2865±772(1700-5500)*	*0,414*

Table 7 . Comparison of Preoperative and Postoperative Glomerular Filtration Rate (GFR)

	Case group (n=55)	**Control group (n=55)**	**P value**
Preoperative GFR (ml/dk/1.73 m^2)	**86,82±20,01(46-124)**	**91,18±15,16(49-117)**	**0,143**
Postop 1st day	81,35±22,03(35-118)	88,5**±19,4 (47-126)**	**0,062**
Postop 7th day	92,52±22,27(24-138)	90,6±22,3 (18-128)	**0,876**
Postop 30th day	87,70±19,70(23-129)	87,2±24,74 (40-119)	**0,439**
Postop 360th day	91,17±18,94(39-122)	87,42±25,19 (43-122)	**0,673**

values (CKD-EPI) in Patients

Table 8: Comparison of Patients' Classification according to the three Acute Kidney Injury

Acute Kidney Injury Classifications	**Case group (n=55)**	**Control group (n=55)**	**P value**
RIFLE-Risk	5 (%9,1)	10 (%18,2)	**0,165**
RIFLE-Injury	2 (%3,6)	0	**0,495**
RIFLE-Failure	0	3 (%5,5)	**0,243**
AKIN-1	6 (%10,9)	10 (%18,2)	**0,279**
AKIN-2	2 (%3,6)	0	**0,248**
AKIN-3	0 (%0)	2 (%3,6)	**0,243**
KDIGO-1	6 (10,9%)	11 (%20)	**0,187**
KDIGO-2	2 (3,6%)	0	**0,248**
KDIGO-3	0	3 (5,45%)	**0,243**
Transient-AKI	6(%10,9)	4(%7,3)	**0,507**
Sustained-AKI	2(%3,6)	5(%9,1)	**0,241**
Late-AKI	0	4 (%7,3)	***0,042***

(AKI) Criteria and Sutherland Classification

POSTOPERATIVE SECONDARY OUTCOMES

Table 9: Comparison of Hospital Stay, Intensive Care Unit (ICU) Stay, Total Drainage, and Extubation Durations from Postoperative Major Comorbidity Determinant Data between the Two Groups

Variables	**Case group (n=55)**	**Control group (n=55)**	**P value**
Extubation time (hour)	16,57±43,87(1-336)	16,79±28,15(6-168)	**0,809**
Total drainage (ml)	664,2±384,08(50-2100)	791,82±560,4(250-370)	**0,274**
ICU stay (days)	3,18±4,53(1-30)	2,71±2,19(1-12)	**0,526**
Total hospital stay (days)	8,54±5,97(4-42)	12,78±6,38(6-44)	***0,049***

Table 10: Comparison of Preoperative and Postoperative 1-Week and 1-Year Ejection Fraction (EF) Values in Both Groups

LVEF values	**Case group (n=55)**	**Control group (n=55)**	**P values**
Preoperative LVEF (%)	59,64±6,79(45-65)	59,81±7,32(45-65)	0,93
Postoperative 7th day LVEF(%)	59,18±5,59(40-65)	56,54±9,12(30-65)	0,26
Postoperative 1st year LVEF (%)	58,98±6,47(40-60)	56,41±15,03(25-60)	0,67

(LVEF: Left Ventricular Ejection Fraction)

There were no adverse events associated with these study.