



Relation of High Flow Access for Hemodialysis with High Cardiac Output Failure

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

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List of Abbreviations

2,3-DPG	2,3,-diphosphoglycerate
ACC	American college of cardiology
ACEi	Angiotensin converting enzyme inhibitor
ACS	Acute coronary syndrome
AHA	American heart association
ANP	Atrial natriuretic peptide
ARBs	Angiotensin receptor blockers
ATP	Adenosine triphosphate
AV	Arterio venous
AVF Qa / CO	Arterio venous fistula flow/ cardiac output
AVF Qa	Arterio venous fistula flow
AVF	Arterio venous fistula
AVG	Arterio venous graft
BMI	Body mass index
BMS	Bare metal stents
BNP	B-type natriuretic peptide
BSA	Body surface area
BUN	Blood urea nitrogen
CA	Coronary artery
CABG	Coronary artery bypasses grafting
CAD	Coronary artery disease
CF	Cardiac failure
CHF	Congestive heart failure

List of Abbreviations

CHOIR	Correction of Hemoglobin and Outcomes in Renal Insufficiency
CI	Cardiac index
CKD	Chronic kidney disease
CLI	Critical limb ischaemia
CMS	Centers for Medicare and Medicaid Services
CO	cardiac output
CPR	Cardio-pulmonary recirculation
Cr. Cl.	creatinine clearance
CREATE	Cardiovascular Reduction Early Anemia Treatment Epoetin β
CREDO	Clopidogrel for the Reduction of Events During Observation
CRF	Chronic renal failure
CRP	C-reactive protein
CRUSADE	Can Rapid Risk Stratification of Unstable Angina Patients Suppress Adverse Outcomes with Early Implementation of the ACC/AHA Guidelines
CT	Computed tomography
CTA	Computed tomography angiography
cTN-I	Cardiac troponin I
cTN-T	Cardiac troponin T
CURE	Clopidogrel in Unstable Angina to Prevent Recurrent Events
CV	Cardiovascular
CVCs	Central venous catheters
CVD	Cardiovascular disease

List of Abbreviations

DDAVP	1-deamino-8-d-arginine vasopressin
DES	Drug eluted stent
DOPPS	Dialysis Outcomes and Practice Patterns Study
DPC	Dialysis Patient Citizens
DPTI	diastolic pressure time index
DSE	Dobutamine stress echocardiography
EBCT	Electron beam computed tomography
ECG	Electrocardiography
E-DcT	E-wave deceleration time
EDV	End diastolic volumes
EF	Ejection fraction
eGFR	Estimated glomerular filtration rate
eNOS	Endothelial nitric oxide synthase
EPO	Erythropoietin
ESPRIT	European/Australasian Stroke Prevention in Reversible Ischaemia Trial
ESRD	End stage renal disease
ET-1	Endothelin 1
EXTRACT	Enoxaparin and Thrombolysis Reperfusion for Acute Myocardial Infarction trial
FOSIDIA	Fosinopril in Dialysis trial
GFR	Glomerular filtration rate
GPIs	Glycoprotein IIb/IIIa inhibitors
HARP	The UK Heart and Renal Protection study
HD	Hemodialysis
HeRO	Hemodialysis Reliable Outflow Vascular Access Device

List of Abbreviations

HFA	High flow access
HOCF	High output cardiac failure
HOPE	Heart outcome prevention evaluation
HR	Heart rate
IHD	Ischaemic heart disease
IMN	Ischemic monomelic neuropathy
IVSd	Inter ventricular septum thickness at diastole
JVP	Jugular venous pressure
KAMIR	Korea Acute Myocardial Infarction Registry
KDIGO	Kidney Disease: Improving Global Outcomes
KDOQI	Kidney disease outcome quality initiatives
LAD	Left atrial diameter
LAV	Left atrial volume
LDL	Low density lipoprotein
LMWH	Low molecular weight heparin
LV	Left ventricle
LVEDD	Left ventricular end diastolic diameter
LVEDP	Left ventricular end diastolic pressure
LVEDV	Left ventricular end diastolic volume
LVESD	Left ventricular end systolic diameter
LVESV	Left ventricular end systolic volume
LVH	Left ventricular hypertrophy
LVM	Left ventricular mass
LVMi	Left ventricular mass index

List of Abbreviations

LVOT area	Left ventricular outflow tract area
LVOT VTI	Left ventricular outflow tract Velocity time integral
LVOTd	Left ventricular outflow tract diameter
MA	Micro albuminuria
mo	Months
MPS	Myocardial perfusion scintigraphy
MRI	Magnetic resonance imaging
NB	Nicaladoni-Branham
NDD-CKD	Non-dialysis-dependent chronic kidney disease
NHANES	National health and nutrition examination survey
NKF	National Kidney Foundation
NKF	National Kidney Foundation
NO	Nitric oxide
NOS	Nitric oxide synthases
NSTEMI	Non-ST segment elevation myocardial infarction
PAD	Peripheral arterial disease
PAP	Pulmonary artery pressure
PCI	Percutaneous Trans luminal coronary angioplasty
PD	Peritoneal dialysis
PDE5i	Phosphodiesterase 5 inhibitors
PH	Pulmonary hypertension
PLATO	Platelet Inhibition and Patient Outcomes
PPV	Positive predictive value

List of Abbreviations

PRA	Plasma renin activity
PRISM-PLUS	Platelet Receptor Inhibition in Ischemic Syndrome Management in Patients Limited by Unstable Signs and Symptoms study
PTA	Percutaneous transluminal angioplasty
PTFE	Polytetrafluoroethylene
PTH	Parathyroid hormone
PVR	Pulmonary vascular resistance
PWD	Posterior wall thickness
RAS	Renin angiotensin system
RRT	Renal replacement therapy
RV	Right ventricle
RVEDD	Right ventricular end diastolic diameter values
RWT	Relative wall thickness
SEVR	Subendocardial viability ratio
SHARP	Heart and Renal Protection trial
SHPT	Secondary hyperparathyroidism
SPAP	Systolic pulmonary artery pressure
Spp.	Species
SPSS	Statistical Package for the Social Sciences
SPTI	Systolic pressure time index
STEMI	ST segment elevation myocardial infarction
SV	Stroke volume
SVR	Systemic vascular resistance

List of Abbreviations

SWEDHEART	Swedish Web-System for Enhancement and Development of Evidence-Based Care in Heart Disease Evaluated According to Recommended Therapies
TAPSE	Lower tricuspid annular plane systolic excursions
TARGET	Tirofiban and ReoPro Give Similar Efficacy Outcome Trial
tHcy	Plasma total homocysteine
TREAT	Trial to Reduce Cardiovascular Events with Aranesp Therapy
UACR	Urinary albumin creatinine ratio
UAE	Urinary albumin excretion
UFH	Unfractionated heparin
URR	Urea reduction ratio
USRDS	U.S. Renal Data System
VA	Vascular access
VARDI	Vascular access related distal ischaemia
Vcf	Velocity of circumferential fiber shortening

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