

**ICU Management of Critically Ill
Patients Presented with Acute
Renal Failure in Association with
Systemic Organ Failure**

Essay

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Intensive care medicine*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

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List of Abbreviations

ACC	: American College of Cardiology
ACE-I	: Angiotensin converting enzyme inhibitors
aCL	: Anticardiolipin antibodies
ACPAs	: Anti-citrullinated protein antibodies
ACR	: American College of Rheumatology
ACS	: Acute coronary syndrome
ADAMTS13	: A Disintegrin And Metalloproteinase with a ThromboSpondin type 1 motif, member13
ADH	: Antidiuretic hormone
ADHF	: Acute decompensated heart failure
ADMA	: Asymmetric di-methyl-arginine
AHA	: American Heart Association
AKIN	: Acute kidney injury network
AMI	: Acute myocardial infarction
ANA	: Antinuclear antibody
ANP	: Atrial natriuretic peptide
AP	: Alkaline phosphatase
aPL	: Antiphospholipid antibody
APS	: Antiphospholipid syndrome
ARBs	: Angiotensin receptor blockers
ARDS	: Acute Respiratory Distress Syndrome
ATN	: Acute tubular necrosis
AVP	: Arginine vasopressin
B2M	: Beta-2-microglobulin
BNP	: Brain natriuretic peptide
BUN	: Blood urea nitrogen

List of Abbreviations (Con.)

C-ANCA	: Cytoplasmic antineutrophil cytoplasmic antibodies
CCD	: Cortical collecting duct
CD	: Collecting duct
CHCC	: Chapel Hill Consensus Conference
CHF	: Chronic heart failure
CKD	: Chronic kidney disease
CK-MB	: Creatine kinase MB
COP	: Cardiac output
CRS	: Cardiorenal syndrome
CSS	: Churg–Strauss syndrome
DAH	: Diffuse alveolar hemorrhage
DCT	: Distal convoluted tubule
DHCC	: Dihydroxycholecalciferol
DM	: Dermatomyositis
EAD	: Extracorporeal Albumin Dialysis
EAV	: Effective arterial volume
ECF	: Extracellular fluid
EMG	: Electromyography
eNOS	: Endothelial nitric oxide synthase
EPO	: Erythropoietin
ERPF	: Effective renal plasma flow
ESC	: European society of cardiology
FGF23	: Fibroblast growth factor 23
GBM	: Glomerular basement membrane
GDF-15	: Growth differentiation factor-15
GFR	: Glomerular filtration rate
GGT	: Gamma-glutamyl transferase

List of Abbreviations (Con.)

GP-BB	: Glycogen phosphorylase isoenzyme
GST	: Glutathione S-transferase
H-FABP	: Heart-fatty acid binding protein
HRS	: Hepatorenal syndrome
HSP	: Henoch–Schönlein purpura
HUS	: Hemolytic uremic syndrome
IAC	: International ascites club
ICF	: Intracellular fluid
IgAN	: IgA Nephropathy
IL18	: Interleukin-18
IMA	: Ischemia modified albumin
INF	: Interferon
ITP	: Idiopathic thrombocytopenic purpura
KDOQI	: Kidney disease outcomes quality initiative
KF	: Filtration coefficient
KIM-1	: Kidney injury molecule-1
LDH	: Lactate dehydrogenase
L-FABP	: Liver fatty acid binding protein
LH	: Loop of henle
LPS	: Lipopolysaccharide
LV	: Left ventricle
MABP	: Mean arterial blood pressure
MARS	: Molecular Adsorbent Recirculating System
MC	: Mixed cryoglobulinaemia
MHC	: Major histocompatibility complex
MI	: Medullary interstitium
MLC1	: Myosin light chains 1

List of Abbreviations (Con.)

MMP9	:	Matrix metalloproteinase 9
MPA	:	Microscopic polyangiitis
MPO	:	Myeloperoxidase
MRProANP	:	Midregional prohormone of atrial natriuretic peptide
NAG	:	N-acetyl- β -D-glucosaminidase
NAGL	:	Neutrophil gelatinase associated lipocalin
NCV	:	Nerve conduction velocity
NE	:	Norepinephrine
NFP	:	Net filtration pressure
NHE3	:	Sodium hydrogen exchange 3
NO	:	Nitric oxide
PAH	:	Para aminohippuric acid
P-ANCA	:	Perinuclear antineutrophil cytoplasmic antibodies
PCO ₂	:	Carbon dioxide tension
PCT	:	Proximal convoluted tubule
PG	:	Prostaglandin
PM	:	Polymyositis
PRS	:	Pulmonary renal syndrome
PTH	:	Parathyroid hormone
RA	:	Rheumatoid arthritis
RAAS	:	Renin angiotensin aldosterone system
RBF	:	Renal blood flow
RBP	:	Retinol binding protein
RCC	:	Renal cell carcinoma
RPF	:	Renal plasma flow
RRT	:	Renal replacement therapy

List of Abbreviations (Con.)

SBP	: Spontaneous bacterial peritonitis
SDMA	: Symmetric di-methyl-arginine
SLE	: Systemic lupus erythematosus
SNS	: Sympathetic nervous system
ST2	: A member of interleukin-1 family
sVEGFR-1	: Soluble fms-like tyrosine kinase receptor-1
Or	Or
sFlt-1	Vascular endothelial growth factor receptor-1
SVR	: Systemic vascular resistance
TIPS	: Transjugular Intrahepatic Portosystemic Shunt
Tpn	: Troponin
TTP	: Thrombotic-thrombocytopenic-purpura
VC	: Vasoconstriction
VD	: Vasodilation
VD Rs	: Vitamin D receptors
VEGF	: Vascular endothelial growth factor
VIP	: Vasoactive intestinal polypeptide
VR	: Vasa recta
WG	: Wegener's granulomatosis
WRF	: Worsening of renal function
α GST	: α -Glutathione S-transferase
α 1M	: Alpha-1 microglobulin
β 2GPI	: β 2 glycoprotein-I

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