Current Status of the Implication of the Clinical Practice Pattern in Hemodialysis Prescription in Regular Hemodialysis Patients in Egypt (Assiut) – sector (A)

THESIS

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List of Abbreviations

2M	2 microglobulin
ACE	Angiotensin-converting enzyme
ADME	Asymmetric dimethylarginine
ADPKD	Autosomal Dominant Polycystic Kidney Disease
AR	Access recirculation
ARB	Angiotensin receptor blocker
ARF	Acute renal failure
AV	Arteriovenous
AVF	arteriovenous fistulae
AVG	Arteriovenous graft
AV PTFE	Arterio-venous Expanded polytetrafluoroethylene
BMI	Body mass index
BSA	Body surface area
BUN	Blood urea nitrogen
BW	Body weight
C0/C	Predialysis to postdialysis concentration ratio
CAPD	Continuous ambulatory peritoneal dialysis
CAPR	Cardiopulmonary recirculation
CAV	Average concentration

CAVH	Continuous arteriovenous hemofiltration
CDC	The center of disease control
CFU	Colony-forming unit
CLD	Chronic liver disease
CKD	Chronic Kidney Diseases
COPD	Chronic obstructive lung disease
COX-2	Cyclooxygenase-2
CPMs	Clinical Performance Measures
CPR	Clinical Practice Recommendation
CVD	Cardiovascular disease
CVS	Cardiovascular system
CVVHD	Continuous veno-venous hemodialysis
DM:	Diabetes Mellitus,
DOPPS	Dialysis Outcomes and Practice Patterns Study
DOQI	Dialysis Outcomes Quality Initiative
ECF	Extracellular fluid
ECV	Extracellular volume
Egfr	Estimated glomerular filtration rate
Ekr	Equivalent renal clearance
eKT/V	Urea-equilibrated Kt/V
ESA	Erythropoietin stimulating agent

ESRD	End stage renal disease
ESRF	End stage renal failure
G Urea	Generation rate
GFR	Glomerular filtration rate
HbALE	Hemoglobin A1c
HBsAg	Hepatitis B surface antigen
HBV	hepatitis B virus
HCV	hepatitis C virus
HD	Hemodialysis
HDF	Hemodiafiltration
HIV	human immunodeficiency virus
HMG	3-Hydroxy-3-methylglutaryl
HR	Hazard ratio
HRQPL	Health-related quality of life
HTN	Hypertension,
IDEAL	Initiating Dialysis Early And Late
K/DOQ 1	The National Kidney Foundation Kidney Disease Outcome Quality Initiative
K0A	Dialyzer mass transfer area coefficient
Kee	Continuous equivalent clearance
KD	Dialyzer clearance
KDOQI	Kidney Disease Outcomes Quality Initiative

Keen	Dialyzer clearance estimated by conductivity
KLS	Kidney Learning System
Kr	Residual native kidney urea clearance
KRT	Kidney replacement therapy
Kt/V	Clearance expressed as a fraction of urea or body water volume
KT/VUREA	Urea clearance expressed as Kt/V
KUF	Ultrafiltration coefficient
KUREA	Effective (delivered) dialyzer urea clearance
LVH	Left ventricular hypertrophy
MDRD	Modification of Diet in Renal Disease
MOH	Ministry of Health
Nekr	Equivalent renal clearance normalized to body size
NHANES	The National Health and Nutrition Survey
NIVM	Noninvasive monitoring
NKF	National Kidney Foundation
nPCR	Normalized protein catabolic rate
nPNA	Normalized protein nitrogen appearance rate
NS	Not significant
OR	Odds ratio
PD	Peritoneal dialysis
QA	Quality assurance

QOL	Quality of life
RC	Remote compartment
RKF	Residual kidney function
Rkt/v	Residual Kt/V
RRT	Renal replacement therapy
SHPT	Secondary hyperparathyroidism
SLE	Systemic Lupus Erythematosus.
SpKT/V	Single-pool delivered Kt/V (by dialysis only, exclusive of RKF)
SRI	Solute removal index
STDKT/V	Standard Kt/V
TAC	Time-averaged concentration
TCV	Total cell volume
Td	Time from beginning to end of dialysis
Tmp	Transmembrane pressure
UF	Ultrafiltration
UFR	Ultrafiltration rate
URR	Urea reduction ratio
USRDS	Unites states renal data system
Vurea	Patient's volume of urea distribution
WHO	The World Health organization

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INTRODUCTION

Studies examining the link between research evidence and clinical practice have consistently shown gaps between the evidence and current practice. Some studies in the United States suggest that 30%–40% of patients do not receive evidence-based care, while in 20% of patients care may be not needed or potentially harmful.1 However, relatively little information exists about how to apply evidence in clinical practice, and data on the effect of evidence-based guidelines on knowledge uptake, process of care or patient outcomes is limited **(Locatelli et al.,2004)**.

In recent years, specific clinical guidelines have been developed to optimize the quality of anemia management secondary to chronic kidney diseases(CKD).As a result, the National Kidney Foundation Kidney Disease Outcome Quality Initiative (K\DOQ I) guidelines and the Renal-European Dialysis and Transplantation Association best practice guidelines have been published in USA & Europe. Therefore; clinical practice guidance help individual physician and physicians as group to improve their clinical performance and thus raise standard of patient care towards optimum levels, They may also help to insure that all institution provide an equally good base line standard of care ***(Cameron,1999)*.**

Guidelines practiced on anemia and actual practices are much different with different places and patients according to treatment. Moreover, in individual countries and individual units within countries local circumstances relating to economic conditions; organization of health care delivery or even legal constraints may render the immediate implementation of best practice guidelines difficult or impossible. Nevertheless, they provide a goal against which progress can be measured ***(Locatelli et al., 2004).***

Dialysis Outcomes and Practice Patterns Study (DOPPS) has observed a large variation in anemia management among different countries. The main hemoglobin concentration in hemodialysis patient varied widely across the studied countries ranging between 8g/dl to 11g/dl. The percentage of prevalent hemodialysis patient receiving erythropoietin stimulating agent 'ESA' has increased from 75% to 83%. The percentage of HD patient receiving iron varies greatly among DOPPS countries range from 38% to 89%, ***(Locatelli et al., 2004).***

There are challenges in implanting clinical guidelines in medical practice. Overall DOPPS data which show that, despite the availability of practice guidelines for treatment of renal anemia, wider variation in anemia management exists as gap between what is recommended by the guidelines and is accomplished in every day clinical practice. Compliance with clinical guidelines is an importance indicator of quality and efficacy of patient care at the same time their adaptation in clinical practice may be initiated by numerous factors

including; clinical experts, patient performance, constrains of public health policies, community standard, budgetary limitation and methods of feeding back information concerning current practice ***(Cameron, 1999).***