

**Current Status of the Implication of the
Clinical Practice Pattern in Hemodialysis
Prescription in Regular Hemodialysis
Patients in Egypt in Alexandria
Governorate (sector C)**

Thesis

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By

Heba Mosad Ebrahim
M.B.B.Ch – Ain Shams University

Supervised By

Prof. Dr. Howaida Abd-Elhameed El-Shennawy

Professor of Internal Medicine and Nephrology
Faculty of Medicine - Ain Shams University

Dr. Haitham Ezzat Abd-Elaziz

Lecturer of Internal Medicine and Nephrology
Faculty of Medicine - Ain Shams University

Faculty of Medicine
Ain Shams University

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List of Contents

<i>Subject</i>	<i>Page No.</i>
List of Abbreviations	i
List of Tables.....	iii
List of Figures	v
Introduction	1
Aim of the Work	4
Review of Literature	
Hemodialysis Prescription	5
Complications of Hemodialysis	27
Hemodialysis Associated Comorbidities	44
Hemodialysis in Egypt	47
Patients and Methods.....	52
Results.....	57
Discussion	95
Summary and Conclusion	106
Recommendations	111
References	112
Appendices	I
Arabic Summary	—

List of Abbreviations

Abbr.**Full-term**

AV	: Arteriovenous access
BFR	: Blood flow rate
BMI	: Body mass index
BP	: Blood pressure
CAPD	: Continuous ambulatory peritoneal dialysis
CKD	: Chronic kidney disease
CMS	: US Centers for Medicare and Medicaid Services
cTnT	: Cardiac troponin T
CV	: cardiovascular
CVC	: Chronic venous catheter
CVD	: Cardiovascular disease
DDS	: Dialysis Disequilibrium syndrome
DFR	: Dialysate flow rate
DM	: Diabetes mellitus
DOPPS	: Dialysis outcome and practice pattern study
ESA	: Erythropoiesis-stimulating agents
ESRD	: End stage renal disease
HBV	: Hepatitis B Virus
HCV	: Hepatitis C Virus
HD	: Hemodialysis
HDF	: Hemodiafiltration
HES	: Hydroxyethyl starch
HF	: Hemofiltration

List of Abbreviations (Cont.)

Abbr.	Full-term
Hgb	: Hemoglobin
HTN	: Hypertension
IDH	: Intradialytic hypotension
IPD	: Intermittent peritoneal dialysis
K/DOQI	: Kidney Disease Outcome Quality Initiative
KDIGO	: Kidney disease improving global outcomes
KOA	: The mass transfer area coefficient
K_{uf}	: The ultrafiltration coefficient
MBD	: Mineral and bone disorder
MI	: Myocardial infarction
MOH	: Ministry of health
NKF	: National Kidney Foundation
PTH	: Parathyroid hormone
RRT	: Renal replacement therapy
SBP	: Systolic blood pressure
TMP	: Transmembrane pressure
UF	: Ultrafiltration
URR	: Urea reduction ratio
β2M	: Beta 2 microglobulin

List of Tables

Table No.	Title	Page No.
Table (1):	Elements of Hemodialysis Prescription.....	6
Table (2):	Hemodialysis Parameters according to K/DOQI guidelines (2006)	26
Table (3):	Distribution of the studied patients in different HD units	58
Table (4):	Number of physicians in different HD units.....	59
Table (5):	Number of nurses in different HD units	60
Table (6):	Number of machines in different HD units ...	61
Table (7):	Patients related demographic characteristics, dialysis duration and viral status in the study population	62
Table (8):	ESRD Etiology in the study population	65
Table (9):	Different Comorbid conditions in the study population	67
Table (10):	Quality of life in the study population	68
Table (11):	Dialysis related characteristics in the study population:	71
Table (12):	Hemodialysis sessions- related complications in the study population.....	79
Table (13):	CKD anemia related therapies in the study population	80
Table (14):	CKD- MBD related therapies in the study population	82

List of Tables (Cont.)

Table No.	Title	Page No.
Table (15):	Supplemental therapies in the study population	85
Table (16):	Serial follow up laboratory profile in the study population.....	88
Table (17):	Iron Profile in the study population	90
Table (18):	Frequencies of hemoglobin, calcium and phosphorus in the study population	90
Table (19):	Hemoglobin Category in the study population	91
Table (20):	Calcium Category in the study population	93
Table (21):	Phosphorus category in the study population	94

List of Figures

Figure No.	Title	Page No.
Figure (1):	Mechanisms of solutes removal in hemodialysis	9
Figure (2):	Comparison of urea clearance rates between low- and high-efficiency hemodialyzers.....	14
Figure (3):	Distribution of the studied patients in different HD units	58
Figure (4):	Number of physicians in different HD units.....	59
Figure (5):	Number of physicians in different HD units.....	60
Figure (6):	Number of physicians in different HD units.....	61
Figure (7):	Sex distribution in the study population.	63
Figure (8):	Viral status in the study population.	63
Figure (9):	ESRD Etiology in the study population.....	66
Figure (10):	Different Comorbid conditions in the study population	67
Figure (11):	Work status in the study population	69
Figure (12):	Dependency status in the study population	69
Figure (13):	Wheel chair status in the study population	70
Figure (14):	Frequency of HD sessions/week in the study population	74
Figure (15):	Duration of HD session in the study population	74
Figure (16):	Sponsoring status in the study population	75
Figure (17):	Types of vascular access in the study population	75

List of Figures (Cont.)

Figure No.	Title	Page No.
Figure (18):	History of access failure in the study population	76
Figure (19):	Number of failed vascular access events in the study population.....	76
Figure (20):	Criteria of dialyzers used in the study population	77
Figure (21):	Criteria of dialysate used in the study population	77
Figure (22):	Anticoagulation type used in the study population	78
Figure (23):	Heparin dose in the study population	78
Figure (24):	Hemodialysis sessions-related complications in the study population.....	79
Figure (25):	Different types of ESA used by the study population	81
Figure (26):	ESA brands used by the study population	81
Figure (27):	Vitamin D supplement used by the study population	83
Figure (28):	Different types of phosphorus binders used by the study population.....	83
Figure (29):	History of Calcimimetics used in the study population	84
Figure (30):	History of iron injection in the study population	86
Figure (31):	History of vitamin B injection in the study population	86

List of Figures (Cont.)

Figure No.	Title	Page No.
Figure (32):	History of folic acid supplement in the study population	87
Figure (33):	History of L-carnitine supplement in the study population.....	87
Figure (34):	History of Blood Transfusion in the study population	89
Figure (35):	Hemoglobin Category in the study population	92
Figure (36):	Calcium category in the study population	93
Figure (37):	Phosphorus category in the study population	94



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Candidate

 **Heba Mosad Ebrahim**

Abstract

Uremia is a quite complex syndrome encompassing a metabolic disorders and accumulation of various sized uremic toxins); that it would be impossible for intermittent renal replacement therapy (RRT) to replace the homeostatic role of the kidneys. Hence, the importance of providing at least adequate dialysis .

Hemodialysis is the most successful and most commonly used form of organ replacement therapy.

Awareness of the potential complications of the procedure should facilitate preventive and remedial interventions. While many of the acute complications of hemodialysis are not immediately life threatening, they do add to the morbidity of dialysis patients and to the overall cost of the therapy. Cardiovascular complications are currently the most common complication of hemodialysis .

Key words: Uremia , Hemodialysis , Hemodialysis complications .

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. 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*).

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 (KDIGO) 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*).

 **Introduction**

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

 **Introduction**

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*).