



شبكة المعلومات الجامعية

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شبكة المعلومات الجامعية
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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالاصل



**ECHOGRAPHY OF THE INFERIOR VENA CAVA FOR
INTRAVASCULAR FLUID VOLUME ASSESSMENT IN
NORMOTENSIVE AND HYPERTENSIVE
HAEMODIALYZED PATIENTS**

THESIS

**Submitted in Partial Fulfillment of the Requirements for
the Master Degree in Internal Medicine**

By

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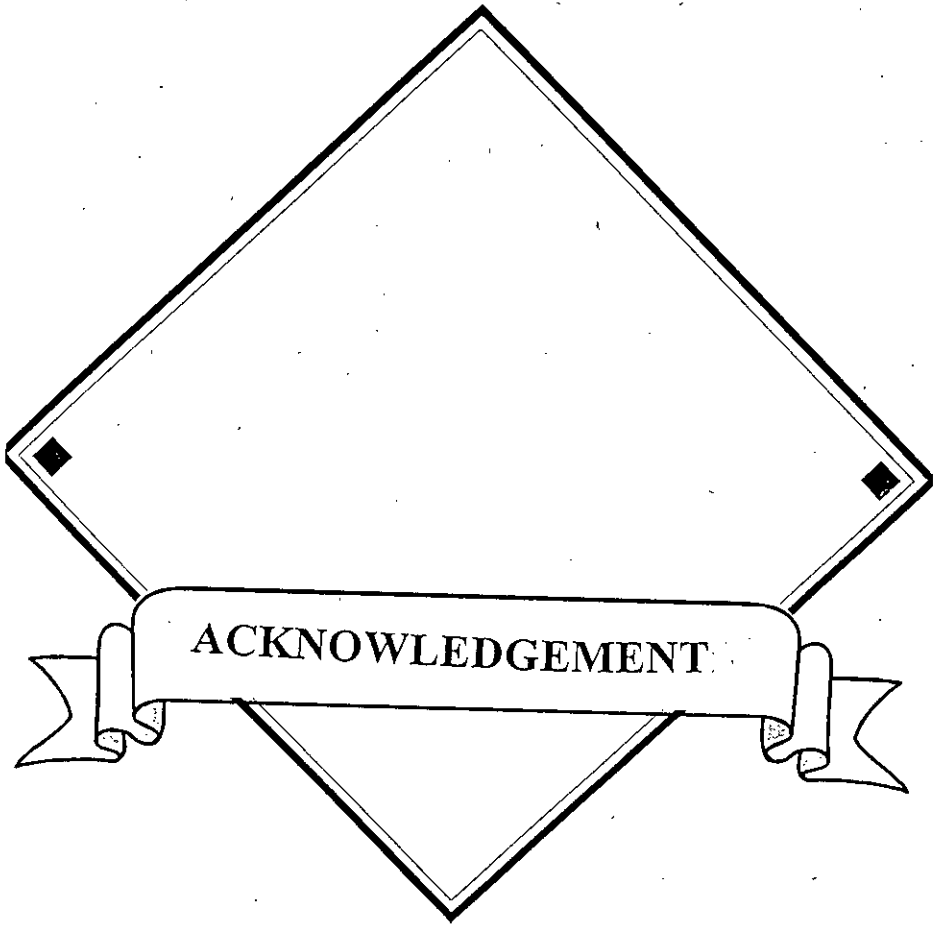
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قَالَ يٰٓأَيُّهَا الْمَلِكُ إِنِّي أَمْسَيْتُ وَأَنَا مِنَ الْمُسْلِمِينَ
الَّذِينَ آمَنُوا بِاللَّهِ وَرَزَقَهُم مِّنْ دُونِ اللَّهِ
وَلَمْ يُشْرِكُوا بِهِ شَيْئًا ۚ وَكَانَ تِلْكَ آيَةُ يَوْمِ
الْقِيَامِ

(سورة يوسف آية ٧٦ ل)



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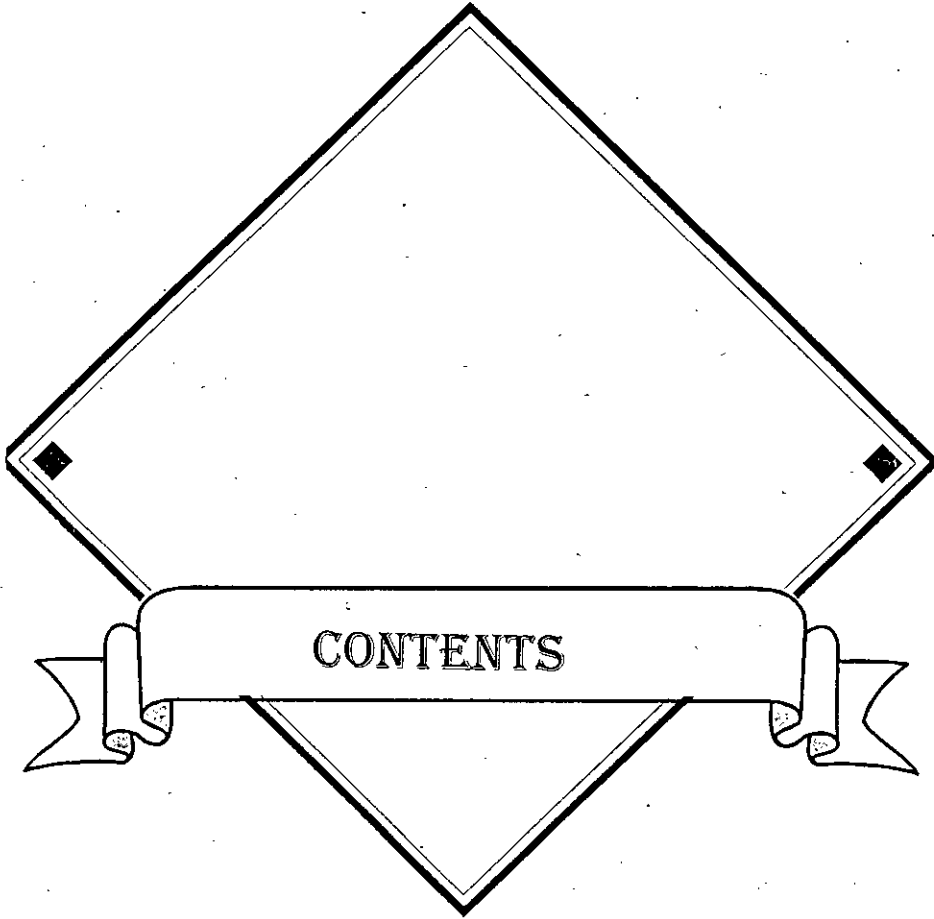
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LIST OF ABBREVIATION

A	: Arterial
ACE	: Angiotensin converting enzyme
ANG-0	: Angiotensinogen
ANG-1	: Angiotensin I
ANP	: Atrial natriuretic peptide
BIS	: Bioimpedance spectroscopy
BP	: Blood pressure
c.GMP	: Cyclic guanosin monophosphate
CAPD	: Continuous amputatory peritoneal dialysis.
CRD	: Chronic renal disease
CRF	: Chronic Renal failure
CVP	: Central venous pressure
CVS	: Cardiovascular disease
DBP	: Diastolic blood pressure
ECV	: Extraceelular Volume
ESRD	: End stage renal disease
HD	: Haemodialysis
IVC	: Inferior vena cava
IVCD	: Inferior vena cava diameter
K	: Mean urea clearance.
K₁	: Urea clearance at the start
K₂	: Urea clearance at the middle
K₃	: Urea clearance at the end.
Kt/v	: K mēan urea clearance, t duration of dialysis session in minuts, V volume of urea distribution.

LVH : Left ventricular hypertrophy
MFB : Multifrequency bioimpedance
SBP : Systolic blood pressure
UKM : Urea kinetic modelling
V : Venous

INTRODUCTION & AIM OF WORK

INTRODUCTION

Fluid balance is an integral component of haemodialysis treatment to prevent under- or overhydration, both of which have been demonstrated to have significant effects on intradialytic morbidity and long-term cardiovascular complications. Fluid removal is usually achieved by ultrafiltration to achieve dry weight which is defined as the body weight at which dialyzed patient remains normotensive after haemodialysis till the next dialysis session despite the consumption of salt and water and withdrawal of antihypertensive drugs (Charra et al., 1996). Unfortunately, there is no standard measure of dry weight, so it is difficult to ascertain adequacy of fluid removal for an individual patient. Additionally, there is a lack of information on the effect of ultrafiltration on fluid shifts in the extracellular and intracellular fluid spaces (Jaeger et al., 1999).

Several clinical, radiological and laboratory tools have been suggested to determine fluid changes as a consequence of dialysis. The clinical status and chest x-ray are not sensitive enough while invasively measured central venous pressure (CVP) is not routinely available and measurement of ANP or cyclic GMP are controversial (Don et al., 1990 and Kouw et al., 1993). Recently the sonographic determination of inferior vena cava (IVC) diameter has been proposed as a good non-invasive method for estimating intravascular volume (Katzarski et al., 1999 and Krassimir et al., 1999).