

**PREVALENCE AND CLINICAL
SIGNIFICANCE OF HEPATITIS "C" VIRUS
IN RENAL TRANSPLANT PATIENTS IN
EGYPT**

Thesis

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of M.Sc. Degree in Internal Medicine*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

... قال رب اشرح لي صدري
ويسر لي امري واحلل عقدة
من لساني يفقهوا قولي ...

"صدق الله العظيم"

"سورة طه آية ٢٥-٢٧"



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List of Abbreviations

HCV	Hepatitis C- virus.
HD	Haemodialysis.
HIV	Human immunodeficiency virus.
ALT	Alanine transaminase
ESRD	End stage renal disease
ELISA	Enzyme linked immunosorbent assay.
RIBA	Recombinant immunoblote assay.
PCR	Polymerase chain reaction.
IgM	Immunoglobulin M.
IgG	Immunoglobulin G.
HBV	Hepatitis B virus.
IFN α	Interferon alpha.
S.C.	Subcutaneous.
Ab	Antibody.
CMV	Cytomegallo virus.
EBV	Epstein Barr virus.
S.Cr.	Serum creatinine.
VZV	Varicella zoster virus.
HSV	Herpes simplex virus.
HBsAg	Hepatitis B surface antigen.
Tx	Transplantation.
UTI	Urinary tract infection
GN	Glomerulonephritis.
MPGN	Membranoproliferative GN
MGN	Membranous GN
EMCs	Essential mixed cryoglobulinaemias
Dx	Dialysis

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INTRODUCTION

AIM OF

THE WORK

INTRODUCTION

Renal transplantation is now an accepted treatment of patients in end-stage renal failure.

A successful transplant, restores not merely life but an acceptable quality of life to such patients.

Chronic liver disease is one of the major complications after kidney transplantation and affects late morbidity and mortality in the recipients (*Jay A., et al., 1996*).

Many factors may be contributed, one of the most important causes is reported to be viral hepatitis, especially hepatitis - C - virus (HCV) infection. Thus it is essential to screen all prospective transplant recipients for the hepatitis B- and C- viruses and for liver disease, all are adverse factors for transplantation and in some patients would constitute contraindication. HCV infection causes the majority of non - A non - B - hepatitis (*Alter et al., 1989*).

Although the virus has not been cultured, recombinant viral antigens have been made and are used in the laboratory to detect anti - HCV (*Choo et al., 1989*).

In renal units, HCV infection was related to both duration of dialysis and the number of blood transfusion units received (*Pouteil - Noble et al., 1991*).

Prevalence rates in dialysis patients vary considerably in different parts of the world, and have been quoted as between 7% and 85% (*S. Naicker, 1997*).

AIM OF THE WORK

Our aim in this study is:

* To detect the prevalence of HCV infection among renal transplant patients and to study clinical, serological and biochemical changes in the liver of (HCV) positive recipients.

REVIEW OF LITERATURE

INFECTIVE COMPLICATIONS OF RENAL TRANSPLANTATION

Infection is a leading cause of morbidity and mortality in transplant recipients with more than 80% suffering at least one episode of infection in the first year. (*Peterson P.K., et al., 1981*).

Infection and rejection are intimately linked through the immunosuppressive therapy (*Rubin RH., 1993*) for example, to combat a rejection episode, increased doses of immunosuppressive agents are needed (which in turn increases the recipient's risk of infection). On the other hand, if the immunosuppression is decreased to help combat an infection. The patient is at higher risk for rejection (*Rubin RH., 1993*).

The risk of infection is strongly determined by an interaction between epidemiologic exposure and net state of immunosuppression (*Rubin R. H. 1993*). The transplant patient is susceptible to any environmental infectious exposure or reactivation of a previously latent infection (*Rubin RH., 1993*). In addition it is influenced by other factors; indwelling catheters, malnutrition, uraemia, hyperglycemia and infection with immunomodulating viruses such as cytomegalovirus (CMV), Epstein-Barr virus (EBV), HCV and human immuno-deficiency virus (HIV).