A descriptive study on the prevalence of HCV among patients with various renal diseases.

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Introduction

As Hepatitis C virus (HCV) infection leads to chronic liver disease, it also leads to extra hepatic manifestations which include: Mixedcryo- globulinemia,lymphoproliferative disorders and renal disease. (Cacoub et al., 2002).

HCV infection been reported in association with distinct has histological patterns of glomerulo- nephritis in native kidneys: *Membrano- proliferative glomerulonephritis (MPGN) associated with type II cryoglobulinemia* is the predominant type of HCV related glomerulo- nephritis. (D'Amico, 1998).

Less common glomerulonephritis has also been reported in HCV infected patients, of these; *MPGN without cryoglobulinemia , membranous GN, Focal Segmental glomerulosclerosis, Proliferative glomerulonephritis, renal thromboti micro-angiopathy associated with anticardiolipin antibodies , Fibrillary* and *immunotactoid glomerulonephritis.* (Markowitz et al., 1998) (Morales et al., 1999), (Stehman et al., 1999).

Cryoglobulinemia is found in all patients with HCV related MGPN and more than 80% of patients with mixed cryo-globulinemia are infected with HCV. (D'Amico, 1998).

Cryoglobulins are immunoglobulins that precipitate at cold temperature.

HCV associated cryoglobulinemic glomerulonephritis seems to be related to the deposition in the glomerulus of an immune complex made by the HCV antigen , anti HCV IgG antibodies and a rheumatoid factor. (Kamar et al., 2006).

The aim of the study

This is a descriptive study which studies the prevalence of HCV among patients with various renal diseases as a co morbid condition that may increase the impact on renal function.

Subjects and methods:

The work is a retrospective study performed on all patients with renal disease attending Nasser Institute nephrology department during the years 2008, 2009.

All patient files will be reviewed for the following:

1- History taking and thorough clinical examination with special stress on

a- History of viral hepatitis or exposure to risk factor

(Such as tartar emetic injection, blood transfusion, operation).

b- Renal manifestation.

. *Dysuria, Hematuria,. Oliguria,. Hypertention*

. *Oedema , lid puffiness*

2- Laboratory investigation

.Complete urine analysis

.Urinary albumin \ creatinine ratio OR 24 hrs urine proteins.

. Complete blood count (CBC)

.Immunological profil

Complement ,ANA , ANCA (if done) .

. Cryoglobulins

. Liver function test

.. Alanine amino transferase (ALT)

.. Aspertate amino transferase (AST)

.. Total and direct billirubin

. Total proteins , serum albumin .

. Coagulation profile

. Kidney function test

.. Serum creatinine ,urea ,uric acid .

.. Serum sodium and potassium

.. Serum calcium ,phosphorus .

. Hepatitis markers .

HCV Ab (ELISA)

HBs Ag

3- Abdominal ultrasound

4- Renal biopsy (if it was done).

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List of Abbreviations

AECA	Anti endothelial cell antibody
Ag	Antigen
ALT	Alanine transferase enzyme
AST	Aspertate transferase
b DNA	Branched DNA
BMI	Body mass index
C	Complement
c DNA	Complementary DNA
CDC	Center for disease control
CD	Cluster of differentiation
CFU-meg	Colony forming unit megakaryocyte
CFU-MK assay	Colony forming unit megakaryocyte assay
CKD	Chronic kidney disease
CRs	Cryoglobulins
DDD	Dense deposite disease
DM	Diabetes mellitus
DNMG	De novo membranous glomerulopathy
DSA	Donner specific alloantibody
E	Viral envelop glycoprotein
EIA	Enzyme immuno assay
ELISA	Enzyme linked immuno sorbant assay
ESRD	End stage renal disease
FDA	Food and drug administration
FSGS	Focal segmental glomerulosclerosis
GBM	Glomerular basement membrane
GFR	Glomerular filtration rate
HAV	Hepatitis A virus
HBV	Hepatitis B virus
HCC	Hepato-cellular carcinoma
HIV	Human immunodeficiency virus
HLA	Human leucocytic antigen
Ig	immunoglobulin

IGF	Insulin like growth factor
IgM Rhf	Immunoglobulin-M rheumatoid factor
IL	Interlukine
INF	Interferone
INR	International normalized ratio
IRES	internal ribosome entry site
IRS	Insulin receptor subetrate protein
ITP	Idiopathic thrombocytopenic purpura
IVIG	Intravenous immunoglobulin
LAC	Low antigen content diet
LCM	Laser capture microdissection
LKM antibody	Liver-Kidney microsomal antibody
LP	Lichen planous
MAC	Glomerular membrane attaking complex
MAIPA assay	Monoclonal antibody specific immobilization of platlet
MC	antigen assay
MGN	Mixed croglobulins
MPGN	Membranous glomerulonephritis
MU	Membranoproliferative glomerulonephritis
NHANES	Million unit
NHL	National health and nutrition examination servey
NIH	Non hodgkin lymphoma
NS	National Institutes of Health
PCR	Non structural proteins
PCT	Polymerase chain reaction
PD	Porphyria cutania tarda
PKR	Immuno-inhibitory receptor programmed death
	Protein kinase R(double-stranded RNA-activated protein kinase)
RF	rheumatoid factor
RIBA	Recombinant immunoblot assay
RIG-I	RNA helicase retinoic acid inducible gene-I
RNA	Ribo-neucliec acid
RPGN	Rapidly progressive glomerulonephritis
RT	Reverse transcriptase enzyme

RVR	Rapid virologic response
SOC	Suppressor of cytokine signaling
SR	Scavenger receptor
SS	Sjogren syndrome
STAT	Signal transducer and activator of transcription
STD	Sexually transmited disease
SVC	Spontaneous virologic clearance
SVR	sustained virologic response
TGF	transforming growth factor
Th cell	T helper lymphocyte
TLR	Toll like receptor
TMA	Transcription mediated amplification
TNF	Tumer necrosis factor
TPO	Thrombopiotin hormone (platlet growth factor)
UTR	Untranslated region
UV irradiation	Ultraviolet irradiation
VCAM	vascular cell adhesion molecule
WHO	Worled health organisation

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