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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

بالرسالة صفحات
لم ترد بالاصل

DETECTION OF TRANSFUSION TRANSMITTED VIRUS [TT VIRUS] IN BLOOD DONORS

THESIS

Submitted for Partial Fulfillment of Master Degree in Clinical and Chemical Pathology

BY

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بِسْمِ اللَّهِ الرَّحمَنِ الرَّحِيمِ

﴿رَبَّنَا ءَاتِنَا مِن لَّدُنكَ رَحْمَةً وَهَيِّئْ لَنَا مِنْ أَمْرِنَا رَشَداً﴾

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LIST OF ABBREVIATIONS

ALT	Alanine aminotransferase
Anti-HBc.	Hepatitis B core antibody
Anti-HBe.	Hepatitis B e antibody
Anti-HBs.	Hepatitis B surface antibody
AST	Aspartate aminotransferase
ALP	Alkaline phosphatase
CMV	Cytomegalo virus.
d ATP	Deoxy adenine triphosphate
dCTP	Deoxy cytosine triphosphate
dGTP	Deoxy guanine triphosphate
dTTP	Deoxy thimine triphosphate
EIA	Enzyme immunoassays
ELISA	Enzyme linked immunosorbont assay
GGT	Gamma glutamyl transferase
HAV	Hepatitis A virus
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HCC	Hepatocellular carcinoma
HDV	Hepatitis delta virus
HEV	Hepatitis E virus
HGBV	Hepatitis GB virus
HGV	Hepatitis G virus
HBsAg	Hepatitis B surface antigen
HBcAg	Hepatitis B core antigen
HBeAg	Hepatitis B e antigen
HTLV	Human T-lymphotropic virus
HIV	Human immune deficiency virus.
IEM	Immune electron microscopy
ORF	Open reading frame
PCR	Polymerase chain reaction
PT	Prothrombin time
PTT	Partial thromboplastin time
RIA	Radioimmuno assay
RIBA	Recombinant strip immunoblot assays
RT-(PCR)	Reverse-transcriptase Polymerase chain reaction.
TTV	Transfusion Transmitted virus
TAA	Transfusion- associated AIDs

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DETECTION OF TRANSFUSION TRANSMITTED VIRUS (TT VIRUS) IN BLOOD DONORS

INTRODUCTON:

Blood transfusion is a life saving procedure in many cases. Blood is obtained from human volunteers (homologous blood) or self donation (autologus blood). One of the most hazards of blood transfusion is the transmission of viral hepatitis; as HBV,HCV, HDV, HGV, and more recently transfusion transmitted virus (TTV), which was discovered in 1997 by representational difference analysis of serial serum specimens from Japanese patients with transfusion associated non-A to G hepatitis. Because of a temporal association between TT viremia and elevation in serum alanine transaminase (ALT) level in three of five patients studied, TTV was proposed as the causative agent of non-A to G hepatitis ***(Nishizawa et al., 1997).***

TTV was initially described as a single- stranded, unenveloped DNA virus and considered to be a member of a new virus family that infect humans, tentatively named the circoviridae ***(Mushahwar et al., 1999).*** TTV DNA was identified by PCR more often in various liver disease cases of non A-E type than in volunteer blood donors ***(Okamoto et al., 1998a)***. Hence, apparently, TTV has shown up as a candidate virus, next to GB virus C (GBV-C) ***(Simons et al., 1995)*** or hepatitis G virus (HGV) ***(Lisitsyn and Wigler, 1993),*** that may explain the causes of non A-E hepatitis cases ***(Takahashi et al., 1998 a).*** Seroepidemiological studies have shown TTV to have global distribution ***(Charlton et al., 1998; Simmonds et al., 1998).***

Tanaka et al (1998a) reported the existence of at least 6 genotypes for TTV from G1 to G6. Four TTV subgroups have been identified in Japanese patients and designated G1a, G1b, G2a and G2b and primers capable of amplifying TTV DNA of any genotype have been developed to evaluate the association of some of them with the severity of liver disease ***(Okamoto et al., 1998 a)***.

TTV contamination was found in a high proportion of blood products ***(Simmonds et al., 1998)***. Use of blood products was associated with an increased risk of TTV infection; suggested a parenteral route of transmission ***(Naoumov et al., 1998; Matsumoto et al., 1999)***. Evidence of infection or exposure to TTV appears to be common among blood donors ***(Takahashi et al., 1998a; Gad et al., 2000;Handa et al., 2000)***.

AIM OF THE WORK