

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Incidence of Viral Hepatitis Type A And B Related to Liver Function Tests and Blood Parameters in the Najaf And Babylon Cities.

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ABSTRACT

One hundred patients with infective infectious viral hepatitis type A,B in the Najaf and Babylon city at Al-Sadder education hospital and Al-Murjan hospital . the age of patients ranged from (4-60) years ,patients were include both gender (females ,males) The collection of data information involved age, gender, biochemical and blood parameter. our findings were revealed . the age group(20-40) more effected with disease, non-significant difference ($P>0.01$) between female and males. while more percent of blood group (A+,O+) (48.1%,33.8%) in Type A, (40.9%,31.8%) in type B .the mean value of total serum protein was recorded non-significant difference. The blood parameter (PCV,WBC) was reported non-significant difference($P>0.01$). But blood platelet count was showed mild decrease in both type (A,B) of infectious viral hepatitis patients, (ALT) appeared elevation in mean values , but (AST) and alkaline phosphatase (ALP) were remained at normal values in the infectious viral hepatitis patients

Keywords: Incidence, Hepatitis type A and B.

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INTRODUCTION

According to the International Committee on Taxonomy of Viruses (ICTV) at 2013, HCV was categorized under Hepatitis virus genera of Flaviviridae family which includes three other genera Flavivirus comprising yellow fever virus and dengue virus, Pestivirus implicate bovine viral diarrhoea and classical swine fever virus, and Pegivirus not assigned to an order. The species hepatitis C virus was considered as a distinct sole member of the genus (1).

There are seven major genotypes of HCV (1-7) and each genotype are divided into several subtypes (a, b, c, d, e, f, g) due to genetic diversity of virus. HCV genotypes differ from each other by 30%-35% at the nucleotide level. (2)

The virion of HCV characterized by a small size ~55-65nm in diameter, spherical, sometimes appeared as pleomorphic particle, enveloped, positive sense single stranded RNA virus. Viral particle possess an isometric core, 30-35nm in diameter of genetic material surrounded by icosahedral lipoprotein bilayer as envelope (3&4)

The envelope glycoprotein 1 (E1) and glycoprotein 2 (E2) spike like surface projection that projected from the outer surface of virion are essential for HCV entry (5).

MATERIALS AND METHODS

One hundred patients was infected with infectious liver hepatitis disease (type A, B) in the Najaf and Babylon cities that conducted out this present study. The age of patients was rang 5 years to fifty years and this study was involved both gender (females and males) this work was dependent on viral screen test, after that carried out the measurement of liver function test (ALP, AST, ALT) and blood parameters (TSB, Plt, WBCs, pcv, and Blood group) by use **HBsAg Rapid Card** (is an In vitro, qualitative, one - step immune - chromatographic assay for the detection of Hepatitis B virus Surface Antigen in serum or plasma) (6).

Determined of liver function test

Determined of Transaminase Activity in Serum

Determined the coloric of aspartate transaminase and alanine transaminase activity according to the Reitman and Frankel way, by using syrbio diagnostic reagents kit (7).

Determination of Serum Phosphatase Alcaline Activity

According to kind and king (1954) method we determined the colorimetric of ALP by using biomerieux kit. (8)

Determined of Total Bilirubin Concentration in Serum

Determination of total bilirubin according to Biuret method by using biolabo kit, (9, 10).

Hematological test

The parameters of haematology were performed on EDTA blood by using Ruby (ABBOTT., U.S.A.) in Haematology laboratory of AL-Sadder Medical City in Najaf province and Al- almarjan hospital. Ruby in a fully automated haematology analyzer performing complete blood count (CBC) on EDTA anti-coagulant blood (11, 12).

RESULTS

Table 1: showed the relation between blood groups with infectious viral hepatitis types A,B. significant (P< 0.01).

YPE		Frequency	Percent	
A	Valid	A+	37	48.1
		AB+	10	13.0
		B+	5	5.2
		O+	26	33.8
		Total	78	100.0
B	Valid	A+	9	40.9
		AB+	4	18.2
		O-	2	9.1
		O+	7	31.8
		Total	22	100.0

Table 2:appeared the prevalence of infectious viral hepatitis type A,B related to age groups significant (P< 0.01).

TYPE		Frequency	Percent	
A	Valid	<11	57	74.0
		21-30	3	3.9
		31-40	9	11.7
		41-50	3	2.6
		>50	6	7.8
		Total	78	100.0
B	Valid	11-20	1	4.5
		21-30	10	45.5
		31-40	10	45.5
		41-50	1	4.5
		Total	22	100.0

Table 3:revealed the prevalence of infectious viral hepatitis A,B in the males and females. significant (P< 0.01).

TYPE		Frequency	Percent	
A	Valid	female	32	40.3
		male	46	59.7
		Total	78	100.0
B	Valid	female	13	59.1
		male	9	40.9
		Total	22	100.0

Table 4: showed mean total serum bilirubin in patients infected with infectious viral hepatitis A,B . significant (P< 0.01).

TYPE	N	Mean	Std. Deviation
A	22	4.6026	2.28220
B	22	4.7455	2.15622

Table 5: identify the relation between some blood parameters (PCV,WBCs, PLT) and in infectious viral hepatitis A,B . significant (P< 0.01).

TYPE	N	Mean	Std. Deviation
A	22	.3482	.02684
B	22	.3373	.03397
A	22	9.7417	2.09234
B	22	8.8182	1.67308
A	22	204.58	32.089
B	22	193.45	17.738

Table 6: demonstrate the relationship between liver enzyme and infectious viral hepatitis A,B. significant (P< 0.01).

TYPE	Test Value = 35						
		T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
A	GPT	10.317	76	.000	93.558	75.50	111.62
B	GPT	3.956	21	.001	83.455	39.58	127.33
A	GOT	4.840	76	.000	26.961	15.87	38.05
B	GOT	1.748	21	.095	25.227	-4.78-	55.24
A	ALP	6.401	76	.000	77.182	53.17	101.20
B	ALP	1.877	21	.074	43.773	-4.73-	92.27

DISCUSSION

In the previous study was carried out on the infectious liver Hepatitis(type C), this previous study has found HCV rate at general individual was 64/150 (42.6%) by utilized specific anti-HCV IgG third generation of ELISA technique ,the age group (>45) years old had a highest percent 24(37.5%), this recordings was less that happened through the same study via(13)in the Babylon city they pointed out that the prevalence of those revealed positive for anti-HCV IgG ELISA test was 71.9% (133/185), also the highest percent of the observation that reported by(14), the recorded that the prevalence of HCV in patients salminea province they appeared positive for third ELISA was 78.95% (60/76). In this present study ,the high prevalence of HCV infection was reported in age groupe mor than (40) years old , males 60% and females 40%at respectively , our findings differed with previous studies , due to the data was collected from males(15) in Pakistan recorded the prevalence of HCV elevated with increase of persons with aged nor than (41) years and had highest rate , while previous study (16) was appeared the high prevalence of HCV infection noticed in the males rather than

females , from other hand current study done by(17) recorded a high rate of HCV in the patients with age ranged (50-65)years old more than young individuals .

CONCLUSION

More percent of blood groups of type A for infectious viral hepatitis is A+ 48.1% , O+ 33.8% and another type of viral hepatitis B is blood group A+ 90.4% , O+ 31. the present study was revealed the age group of the patients with infectious viral hepatitis type A<11 years(74%) and type B (21-30)years (45.5%);(31-40)years 45.5% The percent of the gender in the patients with infectious viral hepatitis type A showed ;male (60%);female (40%) and type B; male 40% ;female 60%.Demonstrate the liver enzyme (ALT, AST, and ALP) in the patients with infectious viral hepatitis type A,B .(AST) and alkaline phosphatase (ALP) were remained at normal values in the infectious viral hepatitis patients.

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