



RESEARCH ARTICLE

## Study The Role of Some Liver Enzymes in Patient with Hepatitis in Karbala

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#### ABSTRACT

The study was done in date 2022. In the public health laboratory.

Twenty-nine samples were collected from the public health laboratory in Karbala from hepatitis patients with three types A, B, and C. These samples included 18 males and 11 females.

The samples were then transferred to Imam Al-Hussein Teaching Hospital in Karbala for liver enzyme tests "GOT, GPT" to evaluate the value of these enzymes compared to ( the age and sex of patients ) with viral hepatitis.

According to the findings, there is a strong correlation between age and viral hepatitis; the older you are, the more likely you are to contract type C and B infections. As for the results of the relationship of sex with liver enzymes for patients with viral hepatitis, during the study and research conducted for a period of no less than 5 months, there is no statistical significant at the  $p = 0.05$ .

### INTRODUCTION

Viral hepatitis is an infectious illness brought on by several viruses that harm liver cells. Such harm might be either transient or irreversible. According to the Centers for Disease Control and Prevention (CDC) (2008),<sup>1</sup> the presence of a severe inflammatory response in the liver tissue that harms hepatic cells is a defining feature of viral hepatitis. Jaundice, or yellow skin, is a side effect of viral hepatitis infection, which is more common in youngsters. Hepatitis has five forms: A, B, C, D, and E. Other varieties, including hepatitis virus G,<sup>1,2</sup> are unclassified or have no evident connection to this illness. Viral hepatitis infections that are transmitted through sexual contact are a serious problem. Acute liver failure is a common cause of death in viral hepatitis patients. Contact with the feces, urine,

and saliva of the infected people is how hepatitis A is spread. Blood transfusions can spread the hepatitis virus, including hepatitis B, C, and D infections.<sup>1,3-5</sup>

Hepatitis Viruses Liver Structure Hepatitis B Stock Vector (Royalty Free) 1352553170 | Shutterstock <https://www.shutterstock.com/image-vector/hepatitis-viruses-liver-structure-b-c-1352553170>

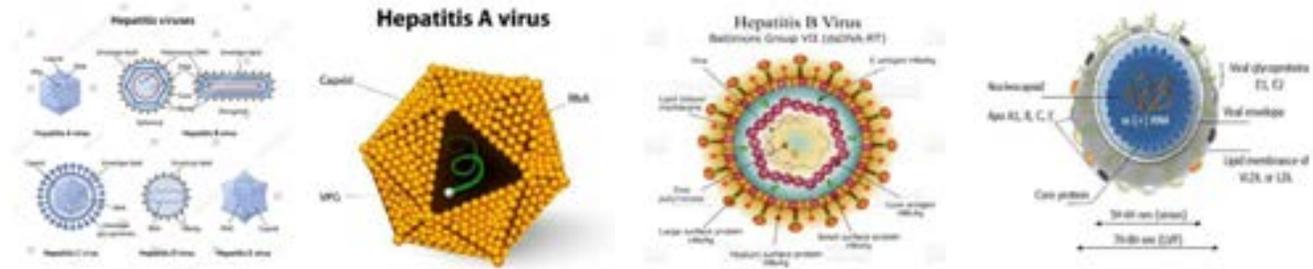
#### Types of Hepatitis

##### Materials and Procedures

This research was done on patients, suffering from viral hepatitis in Karbala Imam Al-Hussein Hospital / Karbala Health Directorate

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**The Tools is**

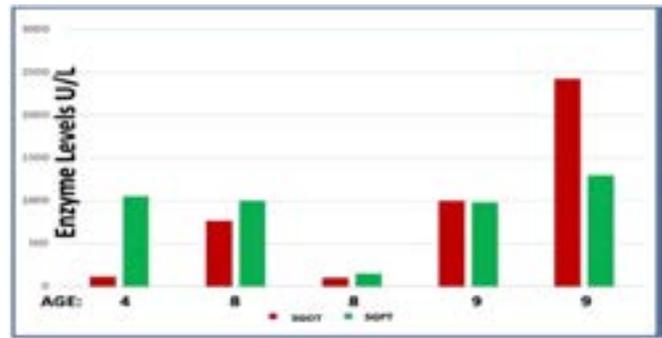
Lab coat and Gloves Tornica, needle Cotton, antiseptic Plasters,risk tupe centrifuge, COPAS advice Blood Serum Kits, GOT. GGP

**RESULTS AND DISCUSSION**

In this research, GOT and GPT (ALT and AST) liver enzymes analysis was performed for 29 samples of hepatitis A, B, and C virus samples, which included 18 males and 11 females from the total samples.

Of the total samples that were conducted above in 29 samples, we noted that the highest positive cases of HBs, HCs, in males in the age groups 21-30 and 42-60, and the lowest positive cases were in the age group under 20 year.

In the case of females, the highest positive cases of HBs, HCs, were in the age group 40-60 years and below. We noticed almost zero injuries at the age of 10-20 years. As for hepatitis A, the percentage is higher in males and females in the age group less than 10 years. The first “Global Health Sector



**Figure 1:** shows us the age correlation of hepatitis A patients with the GOT, and GPT enzyme, where we notice that GOT enzymes are significantly elevated.

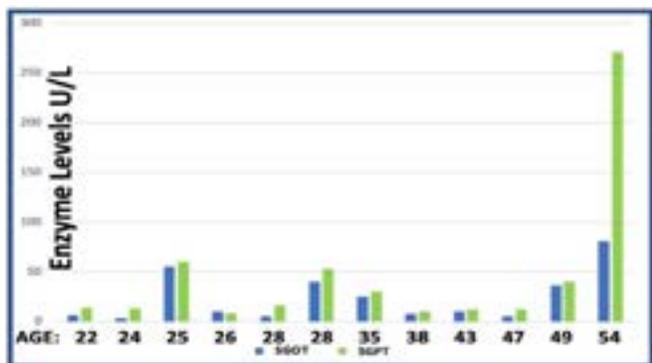
**Table 1:** shows us the gender correlation with the enzyme GOT, GPT for patients with viral hepatitis of three types A, B, and C,

TYPE	Mean GOT	P.V total GOT	Mean GPT	P.V total GPT
A	881.2	0.2088	715.6	0.3219
B	23.675	0.2088	44.88	0.3219
C	35.541	0.2088	79.225	0.3219

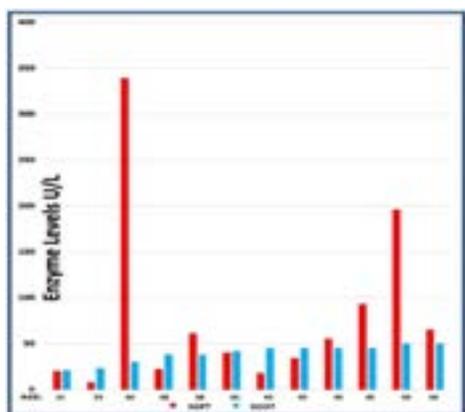
Strategy on Viral Hepatitis 2016-2021” was approved by the World Health Assembly in May 2016. Hepatitis A is expected to have contributed to 7, 134 deaths in 2016 (approximately 0.5% of deaths from viral hepatitis), according to the WHO. 90% of kids have contracted the hepatitis A virus before turning 10; sometimes, they don’t exhibit any symptoms. According to one study, human liver mass decreases by more than 40% during the first two to three decades of life but thereafter essentially stabilizes.<sup>18</sup> It was determined by two more recent investigations that liver volume decreases in humans between puberty and senescence,<sup>19,20</sup> using more accurate and sensitive measurements. In addition, studies and research show a strong correlation between viral hepatitis and aging. The likelihood

**Table 2:** Shows us the gender correlation with the enzyme GOT, GPT for patients with viral hepatitis of three types A, B, and C,

		C				B				A					
Enzyme Gpt	Enzyme Got	Age	Gender	Enzyme Gpt	Enzyme Got	Age	Gender	Enzyme Gpt	Enzyme Got	Age	Gender	Enzyme Gpt	Enzyme Got	Age	Gender
196	50	50	Female	13	3	24	Male	1000	768	8	Female				
339	74	30	Female	16	5	28	Male	150	100	8	Male				
61	7	38	Female	10	7.6	38	Make	980	1000	9	Male				
20	18	21	Male	12	5	47	Male	1298	2426	9	Femal				
7.7	4.5	23	Female	12	10	43	Male	150	112	4	Male				
22	20	38	Male	53	40	28	Male								
65	22	50	Female	271	81	54	Female								
34	36	45	Female	13.9	6.5	22	Male								
93	65	45	Female	40	36	49	Male								
40	30	42	Male	8	10	26	Male								
55	60	45	Male	60	55	25	Male								
18	40	45	Male	30	25	35	Female								



**Figure 2:** shows us the age correlation of hepatitis B patients with the GOT, GPT enzyme, where we notice that GPT enzymes are significantly elevated.



**Figure 3:** Shows us the correlation of age of hepatitis C patients with the enzymes GOT, and GPT, where we notice that GPT enzymes are significantly elevated.

of infection increases with age, particularly for type C and type B infections, due to the weakened immune system and liver that come with advancing years. With time, the liver becomes less resilient: Our livers gradually lose some of their capability for regeneration as well as blood flow and screening capacity, making them more susceptible to inflammation. Environmental poisons have an adverse effect over time: Our liver health changes throughout time as a result of decades of exposure to environmental pollutants. The liver’s function is to filter out these toxins; the older we get, the more damage these chemicals have done to our livers. Weight increase is important! Because our metabolism slows and we become less active as we become older, thus many people gain weight. If we consume fatty foods, sugary drinks, and alcohol, we run the danger of getting diabetes as well as a fatty liver. When hepatitis B is present, fatty liver disease can be fatal because it raises the chance of cirrhosis and liver damage.<sup>21</sup>

Table 1: The above table shows the relationship of age and sex of a number of samples individuals who have viral hepatitis

of three types A, B, and C with liver enzymes including GOT, GPT

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