

A Case Report on Adult Patient with History of Hepatitis C Virus

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Abstract--Objective--To describe a case of adult patient with history of hepatitis C virus

Clinical Presentation and Intervention--A twenty five years old, male was visited his family physician with 104F temperature, body pain, vomiting from 3 days. On his second visit, he reported pain in the right hypochondriac region and unresolved vomiting and fever. His haemoglobin was 14.4g/dl, total bilirubin was 1.8mg/dl, and SGPT (ALT) was 112U /l. In his hepatitis C, polymerase chain reaction (PCR) and HCV RNA genotype test type 3 was detected. Provisional diagnosis of gastritis and acute hepatitis was made and treated with antipyretic, antacids and antiviral medication.

Conclusion-- Physician was clinically diagnosed the condition as acute hepatitis based on the laboratory investigations. Behavioural and dietary modifications were necessary for the treatment of disease.

Keywords--Complete blood count, Direct Acting Antivirals, Hepatitis C, Liver function test, Polymerase chain reaction, World Health Organization

1 Introduction

Hepatitis C virus (HCV) is a blood-borne pathogen and a major health concern globally. Acute HCV infection can lead to several morbidities such as chronic hepatitis C infection, liver cirrhosis and mortality due to hepatocellular carcinoma (HCC) (Al Kanaani, Mahmud, Kouyoumjian, & Abu-Raddad, 2018).

World Health Organization (WHO) compared the HCV with a "viral time bomb". Its estimation showed that about 130 million people were infected with HCV virus and 130 million of whom were chronic carriers at the risk of developing liver cirrhosis and liver cancer. Each year 3 to 4 million people newly infected and 70% of whom developed chronic hepatitis. HCV is responsible for two thirds of all liver transplantation in the developed world (Andrabi, Nafees, & ul Haq, 2015).

HCV is highly endemic in Pakistan, where a national survey conducted in 2007-2008 estimated HCV prevalence at 4.8%, while in 2010 the Punjab province had significantly higher prevalence 6.7% relative to Sindh (5.0%), Baluchistan (1.5%), and Khyber Pakhtunkhwa (1.1%) (Qureshi, Bile, Jooma, Alam, & Afridi, 2010). Second largest HCV burden in all over the world has been found in Pakistan (Lim et al., 2018). The percentage prevalence of HCV in all of the provinces in 2017 was 5.46%, 2.55%, 6.07%, 25.77% and 3.37% in Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan and federally administrated tribal areas respectively but overall prevalence in all provinces of Pakistan was 8.64% (Arshad & Ashfaq, 2017).

Population at higher risk of having HCV infection in Pakistan are community based such as ear/nose piercing, & barbering and health care practices such as medical injections & blood transfusion (Lim et al., 2018). Most common routes of transmission of Hepatitis C infection are unsterilized needle

stick injuries, drug abuse, and contaminated equipments. Symptoms of Hepatitis C are mild and flu-like, sore muscles, feeling very tired, joint pain, poor appetite, dark urine, nausea, stomach pain, and itchy skin (Ahsan, Asim, Bashir, Hussain, & Zafar, 2017).

Availability of direct-acting antivirals (DAAs) provides an opportunity to eliminate hepatitis C. The World Health Assembly targeted 90% reduction in hepatitis C infection incidence and 65% reduction in HCV infection mortality by 2030. To achieve goal of hepatitis C elimination in Pakistan, at least 25 million people must need to screen every year to diagnose 900000 persons and 700000 people need to be treated per year (Chhatwal et al., 2019).

2 Case presentation

A young boy of 25 years old visited his family physician with complains of 104F temperature, body pain and vomiting after eating anything from 3 days. After examination the physician prescribed him Tab. Nimsuline 100mg thrice a day, Tab. Levofloxacin 250mg twice a day and Cap Omeprazole 20mg 1 hour before meal for 5 days. After a week the patient came back to the physician with unresolved fever, vomiting and right side abdominal pain. On further examination physician observed the pale discoloration of eye. The physician advised some laboratory tests which were complete blood count (CBCs), Liver function test (LFTs), typhoid test, electrolyte test and abdominal ultrasound. The reports result showed the raised value of liver function test to the threatened level (Table 1 and 2). According to ultrasound finding liver was fatty and pancreas was enlarged in size.

Table 1: Complete Blood Count Test (CBC)

Test Description	Patient Values	Reference Values (RANGE)
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T Lymphocyte cell	7.7	4-11
Red Blood Cell	4.45	4.2-5.5
Hb(Haemoglobin)	14.4g/dl	12.5-17.5
Platelet count	259	150-400
Neutrophils	66%	40-70
Lymphocytes	28%	20-50
Monocytes	04%	2-10
Eosinophils	02%	1-6
HCT(PCV)	35.5%	35-50
TyphiDot	Negative	Negative

Table 2: Liver Function Test.

Test Description	Patient Values	Reference Values (RANGE)
Bilirubin Total	1.8mg/dl	0.1-1.1
Bilirubin Direct	1.3mg/dl	0.0-0.5
Bilirubin Indirect	05mg/dl	0.1-1.1
SGPT(ALT)	112U/l	9-45
Alkaline Phosphate	298 U/l	Adult: 80-306 Child: upto 645

After seen these results physician recommended him hepatitis B and Hepatitis C tests. The tests results confirmed that patient was HCV reactive. Then for the further conformation physician advised him Polymerase chain reaction (PCR) and HCV RNA genotype, in this type 3 was detected (Table 3).

Table 3: Polymerase Chain Reaction Quantitation.

Test Name	Patient Results
HCV RNA time PCR	Detected
Viral load of HCV RNA	135876 U/l

For the treatment, after HCV diagnosis, physician prescribed him Sofosbuvir 400 mg once a day, ribavirin 400mg twice a day and Nimsuline(100 mg) in case of fever. Physician also encouraged the patient to take preventive actions and healthy diet for the prevention of co infection and transmission of virus to other persons. During therapy different adverse drug reactions were reported such as loss of

appetite, fever, diarrhoea, abdominal cramps, muscle weakness, depression, nausea and vomiting.

3 Discussion

HCV is becoming major health problem of developing countries. Pakistan has the second largest prevalence of HCV ranging from 4.5% to 8%. Prevalence is much higher in rural areas than urban areas of Pakistan, where population not only carries the burden of disease but also many misperceptions and malpractice may increase the risk of HCV infection. Inadequate and poor health care delivery system, improper disposal of hospital wastes, poverty, drug abuse, unscreened blood transfusion, and lack of education are contributing factors for HCV (Gul & Jiwani, 2011).

In 2015, an estimated 1-4 million deaths occurred due to hepatitis pandemic. 5% of Pakistani population was infected by HCV out of which most infected people did not their hepatitis status. In Pakistan the major risk factor for HCV was the reuse of syringes for unnecessary therapeutic purposes. The Government of Pakistan launched its first National Hepatitis Strategic Framework (NHSF) covering the period 2017-21, which follows the WHO global health strategy on viral hepatitis. Licensed treatments for HCV in Pakistan include pegylated & standard interferon, ribavirin and DAA drugs. The NHSF introduced a policy that syringes used in health sectors were auto disabled and Pakistani Government also provided free diagnosis, care and treatment (Fatima, Moin & Qadir, 2018).

4 Conclusion

In this case, physician was clinically diagnosed the condition as acute hepatitis based on the hepatitis C and PCR tests results. Health diet should take to boost the immunity for fight against infection and precautions should take to minimize the transmission of virus to other persons like avoid donating blood and safe sex.

5 References

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