

# SERUM TIMES

Monthly | Volume VI | Issue XI | November, 2021

## SERUM MEDICAL BULLETIN

### From the desk of the Editor-in-Chief

Dear Doctors/Readers,

I wish Happy Bijoya to all of you. The festival season has been going on. Please try to maintain COVID 19 restriction.



In this issue we are going to discuss infection of different types of Hepatitis viruses. Hepatitis infection is related to liver. Two words are involved here, i.e., Hepar in Greek means liver and Itis means inflammation. So, Hepatitis is a disease that is related to liver infection. When liver of a person is inflated or damaged its function is affected. The common factors like heavy alcohol use, toxins, some medication and certain medical conditions are reasons behind hepatitis of a person.

#### Indian scenario of the disease

India is one of the highest Hepatitis prevalent countries of the world. An estimated 40 million chronic HBV infected people are in India. A study by four scientists of AIIMS, New Delhi (Gastroenterology, Hepatology and Endoscopy, 2018) observe Hepatitis A is rarely noticed in adults, Hepatitis B & C infections are responsible for causing both acute and chronic liver diseases in sizeable proportions of patients. Hepatitis causes acute manifestation whereas HDV infection remains to be a rare entity in India. Viral Hepatitis is really a serious concern in India and needs a strategic control on global pattern.

#### Types of Hepatitis viruses

There are, mainly, five different types of Hepatitis viruses - A, B, C, D, E. Most cases of hepatitis are seen in humans are in these five categories. If these viruses attack a human body, within a few weeks it is very worrisome. Hepatitis viruses may be acute or chronic in the human body depending on the various factors like type of the virus, age of the patients, general health of the patients and immune system of the patients.

Hepatitis A, C & E are caused by RNA virus and only Hepatitis B virus is caused by DNA virus. Incubation period or average time the viruses take to develop it enters one's body are different. In case of Hepatitis A it is 30 days, in case of C 40 days, E takes 50 days whereas Hepatitis B takes 90 days.

The next story discusses many important matters of Hepatitis viruses and its medication.

Wish you all a very happy Kali Puja and Deepawali. Maintain Covid restrictions and stay safe.

With best wishes,

Sanjib Acharya

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## Important matters on Hepatitis viruses and its medication

Different types of Hepatitis are liver infections caused by different viruses. Although each virus can cause similar symptoms, they are spread in different ways and can affect the liver differently. Hepatitis A is usually a short term infection. Hepatitis B & C can also begin as short term infections, but in some people, the virus remains in the body can cause chronic or long term infection. There are vaccines to prevent Hepatitis A & B but there is no vaccine for Hepatitis C.

### Importance of HCV diagnosis

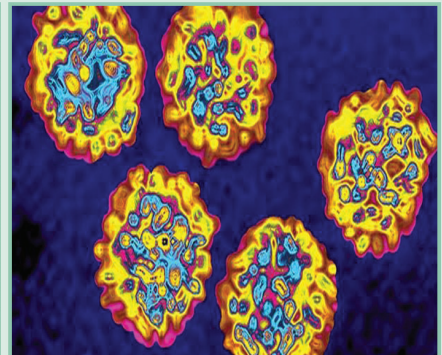
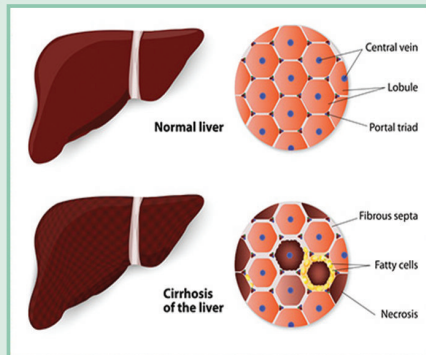
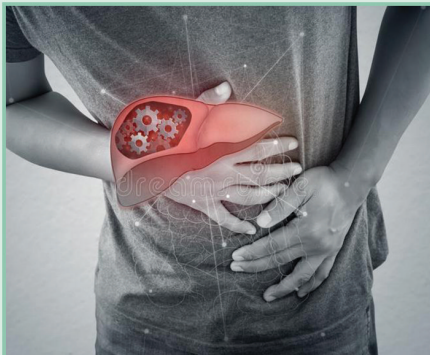
A blood test called HCV antibody test is used to find out if someone has ever been infected with the Hepatitis C virus. It looks for antibodies which are proteins released into the blood stream when someone gets infected with the virus that causes Hepatitis C.

### Difference between acute and chronic Hepatitis C

Acute Hepatitis C occurs within the first six months after it is exposed to the Hepatitis C virus. Hepatitis C can be a short-term illness, but for most people, acute infection leads to chronic infection. On the other hand, chronic Hepatitis C can be a lifelong infection if left untreated. This may lead even to liver damage, cirrhosis (scarring of liver), liver cancer and death.

### Status of hepatitis in India

There have been many studies on prevalence of hepatitis in India. Most of the surveys are known



to have observed similar facts. It is observed that all types of Hepatitis and viral infections are prevalent in Indian patients' populations. The relative incidences of these infections vary slightly from place to place. The viral Hepatitis in India follows a similar pattern seen in many other regions of the world. Hepatitis A is rarely noticed in adults, Hepatitis B & C infections are responsible for causing both acute and chronic liver diseases in sizeable proportion of patients. Hepatitis E causes acute manifestation whereas HDV infection remains to be rare entity in this country. Viral Hepatitis is really a serious concern in India and it needs a long term policy to check the deadly disease.

A report quoting Dr. Chawla, the former director Post Graduate Institute of Medical Education and Research, pointed out that most of the patients were unaware when they carried the disease.

## Existence of non-coded DNA in humans differ them from chimpanzee

Human DNA is very similar to that of the chimpanzee. In evolutionary terms it is our closest living relative. A recent revolutionary research in stem cell at Lund University in Sweden has found that our DNA, so-called non-coded DNA, is the main contributory factor, despite all our similarities, which explains why our brains work differently. The study is published in the journal Cell Stem Cell.

In evolution theory man appeared in his present form (homo sapiens) only some half a million ago. Vermin was in the earth almost 45 crore years ago, jawless fish 40 crore, amphibian 27 crore, reptilian 25 crore and birds appeared as many as 14 crore years ago. The chimpanzee is our closest living relative in evolutionary terms.

### Method of research

Johan Jakobsson, professor of neuroscience at Lund University, who led the study reportedly said, "Instead of studying living humans and chimpanzees, we used stem cells grown in a lab. The stem cells were reprogrammed from skin cells by our partners in Germany, the USA and Japan. Then we examined the stem cells that we had developed into brain cells."

Using the stem cells, the researchers specifically grew brain cells from humans and chimpanzees and compared the two cell types. The researchers then found that humans and chimpanzees use a part of their DNA in different ways, which appears to play a considerable role



The genetic similarity  
between a human and  
a chimpanzee is:

**96%**



in the development of our brains.

"The part of our DNA identified as different was unexpected. It was a so-called structural variant of DNA that were previously called "junk DNA," a long repetitive DNA string which has long been deemed to have no function."

### The newness of the research

The new findings thus indicate that the differences appear to lie outside the protein-coding genes in what has been labelled as "junk DNA," which was thought to have no function and which constitutes the majority of our DNA.

This suggests that the basis for the human brain's evolution are genetic mechanisms that are probably a lot more complex than previously thought, Our results indicate that what has been significant for the brain's development is instead perhaps hidden in the overlooked.

## SERUM's Corporate Social Responsibility (CSR)



Oct 28: Voluntary Blood Donation Camp on the birth anniversary of Sister Nivedita



Oct 26: Free Medication for Thalassemia Kids and painting of Maa Kali's eyes by these kids.

Oct 24: Sri Sanjib Acharya at the Blood Donation Camp at 9A, Raja Kalikrishna Lane (Sovabazar Rajbari)



Oct 23: Bijaya Sammilani organised at Serum Auditorium

Oct 16: Distribution of cloths to the coolie brothers at Babughat



Oct 13: Serum Sharod Baran, 2021 - award ceremony of Serum Sharod Samman - best of the best



An initiative of **SSERUM Analysis Centre (P) Ltd.**

This is a Medical Bulletin. Edited, compiled & published by Editorial Board for and on behalf of S SERUM Analysis Centre (P) Ltd., 82/4B, Bidhan Sarani, Kolkata 700004. Chief Editor: Sanjib Acharya. Website: sserumanalysiscentre.com e-Mail: serum.kol@gmail.com Phone: +91 62895 32188 / 98302 74990 / 98300 16594

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