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**Himalayan Institute of Medical Sciences**  
**Swami Rama Himalayan University**  
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- Dr. Lovneesh Kumar
- Dr. Deepak Kr. Dhar

HIMS/DME/2025/120

Date: 13.05.2025

**Clinical Grand Round**

**Date : 17.05.2025**  
**Day : Saturday**

**Time: 08:30 AM – 09:30 AM**  
**Venue: Adi-Kailash Auditorium**  
**(Near - Emergency Building)**

**Topic: “Therapeutic Plasma Exchange (TPE) in Acute Liver Failure due to Viral Hepatitis: Is it a new standard of Care??”**

**Abstract:**

Trauma The clinical spectrum of acute hepatitis includes acute hepatitis, acute liver injury (ALI), acute liver failure (ALF), and acute-on-chronic liver failure (ACLF), with the acute liver insult being viral hepatitis. Acute hepatitis manifests as elevated liver enzymes while ALI involves acute liver dysfunction with coagulopathy, without encephalopathy; however consensus definition for severe ALI is lacking. ALF is defined as the presence of acute liver dysfunction, coagulopathy and encephalopathy without pre-existing liver disease and with underlying liver disease it is known as ACLF.

Hepatitis A, B, C, D, and E viruses are the main causes of viral hepatitis globally. Although acute hepatitis is most commonly caused by Hepatitis A and E, Hepatitis B is also known to cause acute hepatitis and, in some cases, progress to ALF or ACLF. There is no specific antiviral treatment for Hepatitis A and E, these infections typically resolve spontaneously with standard medical treatment. However, specific antiviral therapies are available for Hepatitis B. Despite the availability of highly effective antiviral treatment, patients with Hepatitis B may still require liver transplantation in cases of acute liver failure or ACLF which may not be feasible due to donor unavailability, financial constraints, or rapid clinical deterioration.

With the advent of artificial liver support system, therapeutic plasma exchange (TPE) have offered new hope and shown promising results for recovery in ALF. Till date, high-volume TPE (HV-TPE) was classified as Category I, Grade IA for ACLF patients without sepsis or multi-organ failure by the American Society for Apheresis (ASFA). Recently, standard-volume TPE (SV-TPE), exchanging 1.5–2 times the plasma volume, has also shown promising results in ACLF and ALF patients. TPE works by removal of albumin bound and unbound toxins, endotoxins and actors like damage-associated molecular patterns (DAMPs) which contribute to organ failure, hepatic encephalopathy, decreased systemic vascular resistance and cerebral blood flow.

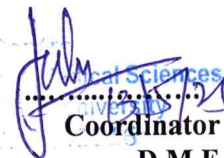
We present a case of acute Hepatitis B flare progressing to ALF despite highly effective antiviral therapy treated with TPE.

**Programme for Clinical Grand Round:**

| Presentation       | Speaker   | Time   |
|--------------------|---|--------|
| Introduction       | Dr. Tanvi Nagpal (SR, Medicine)   | 05 min |
| Case Presentation  | Dr. Astha (JR, Medicine)  | 15 min |
| Case Presentation  | Dr. Rolika Nautiyal (JR, Transfusion Medicine)  | 10 min |
| Conclusion         | Dr. Astha   | 05 min |
| Question & Answers | Dr. Saurabh Singh, Dept. Gastroenterology<br>Dr. Yashaswi Dhiman, Dept. Transfusion medicine<br>Dr. Anant Kumar, Dept. Gastroenterology | 25 min |

Department: **Gastroenterology**

All Faculty & Post Graduate Residents are required to attend the Clinical Grand Round.

Convenor  
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**D.M.E**

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