

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

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SYLLABUS, GUIDELINES & REGULATIONS

OF

**ONLINE CERTIFICATE COURSE IN "PLASMA EXCHANGE IN RODENTICIDE
POISONING"**

ACADEMIC YEAR 2025 ONWARDS

SYLLABUS

(8 weeks online modules & 2 contact classes)

Online Module	Topic
I	Rodenticide- Extent of problem Need for a dedicated Team to manage patients
II	Assessing severity of liver injury in rodenticide, How often to monitor, What to monitor, when to refer for PLEX Introduction to PLEX : Technical Aspects of delivering PLEX – I Types of PLEX, Replacement fluid, Machine Handling, Troubleshooting
III	Technical Aspects of Delivering PLEX- II Anticoagulation, Calcium replacement Prescription of PLEX – Reporting format. Dose, Flow rate, Individualizing the prescription
IV	Utility of PLEX in liver failure: RCTs, Meta-analysis, Effect of etiology
V	PLEX in rodenticidal hepatotoxicity- I Timing, Indications, Contraindications Counselling about liver transplant PLEX in rodenticidal hepatotoxicity- II Safety and Monitoring, Futility, Long-term management
VI	How does PLEX work in liver failure?
VII	Safe delivery of PLEX in liver failure: Vellore Protocol, Line placement, handling; Team approach
VIII	Guidelines for managing rodenticidal hepato-toxicity – NHM. ‘Hub and Spoke’
Contact sessions	Co – Ordinators : Dr C E Eapen Dr. Mangaiyarkarasi,
Venue	Christian Medical College, Vellore.

Recommended reading / References

1. Govindarajan R, Ramamoorthy G, Shanmugam RM, et al. Rodenticide ingestion is an important cause of acute hepatotoxicity in Tamil Nadu, southern India. *Indian J Gastroenterol.* 2021 Aug;40(4):373-379.
2. Eapen CE, Venkataraman J. Rodenticide (Yellow Phosphorus Poison)-Induced Hepatotoxicity in India: Constraints During Management. *J Clin Exp Hepatol.* 2021 Jul-Aug;11(4):414-417.
3. Thomas L, Chandran J, Goel A, et al. Improving Transplant-free Survival With Low-volume Plasma Exchange to Treat Children With Rodenticide Induced Hepatotoxicity. *J Clin Exp Hepatol.* 2023 Mar-Apr;13(2):252-258.
4. Alexander V, Chellaiya GK, Gnanadeepam S, et al. On-treatment decline in MELD score predicts one-month transplant-free survival in rodenticidal hepatotoxicity patients treated with low-volume plasma exchange. *Indian J Gastroenterol.* 2024 Jul 13. doi: 10.1007/s12664-024-01585-3.
5. Goel A, Zachariah U, Daniel D, Eapen CE. Growing Evidence for Survival Benefit with Plasma Exchange to Treat Liver Failure. *J Clin Exp Hepatol.* 2023 Nov-Dec;13(6):1061-1073. doi: 10.1016/j.jceh.2023.06.002.
6. Sithamparapillai K, Zachariah U, Eapen CE, Goel A. Plasma exchange improves survival in acute liver failure - An updated systematic review and meta-analysis focussed on comparing within single etiology. *Indian J Gastroenterol.* 2024 Apr;43(2):397-406.
7. Zachariah U, Vijayalekshmi B, Matthai SM, Goel A, Eapen CE. Extra-corporeal non-liver transplant therapies for acute liver failure: Focus on plasma exchange and continuous renal replacement therapy. *Indian J Gastroenterol.* 2024 Apr;43(2):338-348. doi: 10.1007/s12664-024-01558-6.
8. Satish SP, Narayanasamy K, Sambandam MT, et al.; Christian Medical College (CMC) Vellore Collaborative Group for PLEX to treat Liver Failure. The "Hub and Spoke" model: a pathway for urgent plasma exchange to treat patients with rodenticide ingestion induced acute liver failure in Tamil Nadu, India. *Lancet Reg Health Southeast Asia.* 2024 Apr 12;25:100405. doi: 10.1016/j.lansea.2024.100405.
9. Handbook of Poisoning Management. Primary care to tertiary care. (National Health Mission, Tamil Nadu). www.nhm.tn.gov.in/sites/default/files/2023-02/Hand%20book%20Poisoning%20management_1.pdf. A

10. Eapen CE, Balasubramanian V, Ramamoorthy G, et al. Management of rodenticide poisoning: Tamil Nadu chapter of Indian Society of Gastroenterology guidelines. *Gastroenterol Hepatol Endosc Pract.* 2022;2:1–6.
11. Zachariah U, Kumar SE, Alexander V, et al. Low-volume plasma exchange and low-dose steroid to treat severe liver injury. *Gastroenterol Hepatol Endosc Pract.* 2021;1:47–54.

GUIDELINES

NAME OF THE COURSE : Certificate course in “Plasma Exchange in Rodenticide Poisoning”

ELIGIBILITY CRITERIA :

- The Course is open to All Postgraduate students and Faculty members working in Government Medical Colleges as well as self-financing Medical Colleges affiliated to the Tamil Nadu Dr. MGR Medical University and other Medical Universities in India.

- Postgraduate students and faculty members of D.M. (Hepatology / Gastroenterology / Critical Care), M.D. (Medicine/ Paediatrics /Toxicology/ Anaesthesiology/ Transfusion Medicine/ Emergency Medicine/ Pathology) and Dip. in Clinical Pathology are in priority to pursue the course.

DURATION OF THE COURSE : 8 weeks
(8 online modules once a week, one contact session)