



## **Role of Manual Exchange Transfusion in Severe Hypertriglycerdemia induced Pancreatitis.**

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## Background and Aim

Hypertriglyceridemia is one of the most common causes of acute pancreatitis. It is reported to cause 1 to 30 percent of all cases of acute pancreatitis and up to 56 percent of pregnant cases. The risk of developing acute pancreatitis is approximately 5 percent with triglycerides >1000 mg/dL (11.2 mmol/L) and 10 to 20 percent with triglycerides >2000 mg/dL (22.6 mmol/L). The degree of triglyceride elevation is also associated with the severity of hypertriglyceridemia-induced pancreatitis (HTGP).

In patients with HTGP (serum triglyceride level >1000 mg/dL plus lipase >3 times the upper limit of normal) and worrisome features (hypocalcemia, lactic acidosis, signs of worsening systemic inflammation or organ dysfunction, and/or multi-organ failure). Treatment with plasmapheresis one to two sessions aiming triglyceride levels <500 mg/dL (5.6 mmol/L) is a cornerstone in management.

Here we present our experience in using manual exchange transfusion protocol in management of such case.

## Case Study and Results

39 year old lady with central obesity, known history of hypertriglycerides Non compliant to lipid medications. Admitted to ICU with severe hypertriglyceridemia induced pancreatitis (serum triglycerides 68 mmol/L, serum lipase 1158 U/L), sepsis, ARDS, multi organ failure, Acute renal failure required ventilation and continuous renal replacement therapy during ICU admission.

Patient was started on IV insulin along with oral lipid medications with other dietary restrictions since admission for 72 hours but TGs level failed totally to respond with worsening general condition. Thereafter it was decided to start plasmapheresis which did not work due to the severely lipemic plasma colour and failure of Prismaflex machine to sense the unusual lipemic colour of plasma.

Manual exchange transfusion protocol was used instead of plasmapheresis with venesection of 4 units of the patient blood each unit 450 ml and replacement of 500 ml of normal saline followed by 3 units pRBCs over 4 hours alternatively.

In 24 hours s. TGs level came down significantly to 11 mmol/L (with serial TGs results down to 4 mmol/L on subsequent daily sampling till normal range on discharge) without need for further repeating of the intervention.

## Conclusion

Manual exchange transfusion protocol use is safe and effective in management of severe hypertriglyceridemia induced pancreatitis.



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