

5 Myths of Plasma Exchange

An immunomodulatory therapy

Therapeutic plasma exchange (TPE) is a well-established immunomodulatory therapy.¹

How do you think about TPE and the role it can play in your practice today?

Myth 1: Plasma exchange is unsafe



Reality: Plasma exchange is known to be safe and well-tolerated, with the majority of reactions being mild to moderate, easily treated, and of limited duration.¹ The latest update of the World Apheresis Association (WAA) registry of over 15,000 centrifugal TPE (cTPE) procedures reported that **93.9% of patients did not experience any adverse events (AEs).**²

For the 6.1% of patients who did experience AEs²:

- 1.6% were mild.
- 3.8% were moderate.
- 0.7% were severe.

Myth 2: Plasma exchange is inconvenient



Reality: Many hospitals have established standard processes to ensure that plasma exchange is available through inpatient or outpatient services. According to a 2013 study by Guptill and colleagues, 134 patients receiving TPE showed³:

- 75% of TPE courses were successfully performed using peripheral venous access.
- Of the 100 patients receiving TPE via peripheral venous access, 65% were treated as outpatients.

Myth 3: Plasma exchange is invasive and requires central access



Reality: Centrifugal plasma exchange can be carried out via peripheral or central venous access.

- In several studies, apheresis procedures were performed peripherally in 64.3% to 94.6% of cases.^{2,4-5}
 - TPE with peripheral venous access instead of a central venous catheter (CVC) reduces the risk of infection up to 80%.⁶
- In some patients, peripheral venous access may not be feasible.⁷⁻⁸

Myth 4: All plasma exchange is the same



Reality: The plasma removal efficiency for cTPE is higher than that for membrane TPE (mTPE).⁹⁻¹⁵ This can have an important impact on the patient experience, allowing shorter procedure times and lower flow rates to enable peripheral access.

Mean plasma removal efficiency is 87% for cTPE versus 38% for mTPE.⁹⁻¹⁵

Myth 5: Plasma exchange takes a long time



Reality: Several studies show that cTPE procedures are typically shorter than mTPE procedures.¹³⁻¹⁶

- Of more than 40,000 cTPE procedures, the median procedure time was 1 hour and 45 minutes.¹⁶
- In one study, it took the cTPE device one-third less time to finalize a procedure, compared to the mTPE device.¹³

Safety information

Contraindications:

Leukocytapheresis is contraindicated in acute myeloid leukemia FAB M3 (acute promyelocytic leukemia) because of the accompanying disseminated intravascular coagulation.¹⁷⁻¹⁸

Other contraindications for the use of apheresis systems are limited to those associated with the infusion of solutions and replacement fluids as required by the apheresis procedure and those associated with all types of automated apheresis systems.

Adverse events of apheresis procedures can include¹⁹:

Anxiety, headache, light-headedness, digital and/or facial paresthesia, fever, chills, hematoma, hyperventilation, nausea and vomiting, syncope (fainting), urticaria, hypotension, allergic reactions, infection, hemolysis, thrombosis in patient and device, hypocalcemia, hypokalemia, thrombocytopenia, hypoalbuminemia, anemia, coagulopathy, fatigue, hypomagnesemia, hypogammaglobulinemia, adverse tissue reaction, device failure/disposable set failure, air embolism, blood loss/anemia, electrical shock, fluid imbalance, and inadequate separation of blood components.

Reactions to blood products transfused during procedures can include:

Hemolytic transfusion reaction, immune-mediated platelet destruction, fever, allergic reactions, anaphylaxis, transfusion-related acute lung injury (TRALI), alloimmunization, posttransfusion purpura (PTP), transfusion-associated graft-versus-host disease (TA-GVHD), circulatory overload, hypothermia, metabolic complications, and transmission of infectious diseases and bacteria.^{20,21,22}

Restricted to prescription use only.

- Operators must be familiar with the system's operating instructions.
- Procedures must be performed by qualified medical personnel.

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