
Patient Evaluation and Management

Therapeutic apheresis is applied to a broad spectrum of diseases and syndromes that encompass many medical specialties and patients of all ages. Although it has become almost routine clinically, therapeutic apheresis is an invasive procedure that can have significant physiologic consequences. Not only does the majority of the patient's blood circulate extracorporeally during the procedure, but also large amounts of various solutions are returned that can potentially affect electrolytes, oncotic pressure, osmolarity, blood pressure, infection risk, coagulation, temperature control, and general homeostasis. As noted previously, the requirement for anticoagulation has a profound effect on several physiologic variables. The procedure itself leads to both hemodynamic and dilutional changes. Those physiologic consequences may also result in adverse events for the patient.

A request for a therapeutic apheresis procedure should result in expert recommendations regarding the role of apheresis in the care of the patient.^{2,13} Table 3 gives an overview of important medical decisions surrounding apheresis treatment.

Patient Assessment

The apheresis physician evaluates all patients who are being considered for therapeutic apheresis. The initial consultation includes a review of the patient's medical history, his or her medications, a directed physical examination as appropriate, current laboratory data, and specific markers of disease activity. It is important to confirm the diagnosis, to independently gauge the appropriateness of therapeutic apheresis, and to correctly determine the risks and benefits of the proposed treatment. Coexisting health problems, as well as certain concurrent medications or other treatments, should be considered in planning a course of apheresis therapy. Patients should be reassessed by the apheresis team before each treatment.

Table 3. Key Medical Decisions in Therapeutic Apheresis

Rationale and appropriateness of treatment

- Are there alternative diagnoses?
- What is the disease pathogenesis?
- Is there published experience with therapeutic apheresis for this indication?
- Which modality of therapeutic apheresis is appropriate?
- Is therapeutic apheresis effective?
- Is therapeutic apheresis the primary treatment?
- What is the likelihood that the disease will respond?
- What are the alternatives to therapeutic apheresis?
- Is therapeutic apheresis indicated now?
- What is the risk-to-benefit ratio of therapeutic apheresis?

Patient assessment and monitoring

What is the patient's clinical status (renal/fluid balance, cardiovascular function, pulmonary function, coagulation)?

- Can the patient tolerate the procedure? Give informed consent?
- Where should the procedure be performed?

Treatment plan and endpoint

- What kind of vascular access is indicated?
- What is the proper "dose" per treatment?
- What is the proper number of treatments? What frequency?
- What comorbid conditions might alter the protocol?
- Can the patient tolerate the proposed extracorporeal volume and intraprocedure hematocrit?
- What type of replacement fluids should be prescribed?
- Which baseline laboratory tests are most relevant?
- Will any of the patient's current medications interfere with therapeutic apheresis?