Intraoperative venous drainage through hemodialysis for the treatment of reperfusion injury due to saddle aortic embolism

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Disclosures

• I have nothing to disclose

How could we improve survivals and limb salvages in these patients?

Acute saddle aortic embolism
  ↓
Sudden progressive ischemia
  ↓
Rapid accumulation of anaerobic products
  ↓
High tendency of reperfusion injury
  ↓
Early onset of irreversible ischemia
  ↓
High mortality

Pain on both legs 22 hrs
BP 90/60 mmHg
Pulse 140 beats/min irreg.
Mottled skin on both legs
No movement on both legs
Biochemical study
- Severe hyperkalemia: serum K⁺ = 7.0 mg/dL
- Severe acidosis: pH = 7.0

Unresponsive to medical treatment
- Sodium bicarbonate
- Calcium gluconate
- Glucose & Insulin

Intraoperative venous drainage through hemodialysis

Principle of system

Femoral arteries & veins isolation
- Right
- Left
Right femoral vein cannulation
Good renal function during procedure

Intra aortic emboli

Thigh fasciotomy

Serum potassium level
Summary 1

- Drainage of venous blood from ischemic legs is an effective procedure to prevent toxic anaerobic products perfusing into systemic circulation during arterial reconstruction.

Summary 2

- Intraoperative hemodialysis plays an active role to equilibrate electrolytes and acid-base disturbance in venous blood from ischemic legs

Summary 3

- These procedure should enhance survivals and limb salvages in patients with severely acute ischemic legs and impending / ongoing reperfusion injury.