

Use of Blood Purification in Rhabdomyolysis resulted from amputation of both lower limbs

Nania FA, Mancini D, Simonetti S

Anesthesia and Resuscitation, "S.M.Goretti" Hospital, Latina

Introduction

Rhabdomyolysis is a serious condition that results from muscle injury, and it can indeed manifest as a result of trauma like road traffic accidents. Dialysis is often not sufficient on its own to address the problem, especially in cases with elevated myoglobin levels. Blood purification methods using sorbents can be an alternative or adjunctive treatment.

Methods

We describe a 54-year-old male patient who sustained severe trauma, resulting in complete amputation of both lower limbs after a road traffic accident. His immediate post-operative course, including hemodynamic instability and respiratory issues, was concerning. Given the high levels of myoglobin, ferritin and CPK, the decision to initiate Continuous Renal Replacement Therapy (CRRT) with Cytosorb was an appropriate one for addressing potential complications, especially rhabdomyolysis-induced kidney injury.

Results

The blood gas improvements (pH 7.4, PCO₂ 43, PO₂ 88, P/F ratio 1.48) suggested that respiratory function was improving. After two days of treatment, the decision to suspend CRRT was made due to the improvement in laboratory markers, showing that myoglobin and CPK levels had decreased (fig.1). This decision was based on the clinical improvement in the patient's kidney function, as reflected by normal diuresis and the decrease in toxins. After some days, despite the improvement in respiratory and renal function, the patient continued to require vasopressor. After 10 days, sedation was suspended, and weaning from mechanical ventilation was initiated. Then, antibiotic therapy was suspended. The patient's overall clinical status at this point.

Conclusion

CytoSorb has proven to be effective in cases of amputation-related rhabdomyolysis, particularly when there is a massive release of toxins like myoglobin, CPK, and ferritin. The continued effectiveness of CytoSorb even up to two weeks after treatment cessation is an important aspect, demonstrating the sustained clearance of these toxic substances and the long-term benefit of the therapy (fig 1).

Figure 1

