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Introduction

Rhabdomyolysis is a condition characterized by skeletal muscle breakdown and the release of myoglobin and creatine kinase (CPK). The resulting renal overload can lead to acute kidney injury (AKI). Cytosorb is an extracorporeal adsorption cartridge certified for rapid myoglobin removal. This study analyses the use of Cytosorb in patients with severe rhabdomyolysis.

Methods

This retrospective analysis includes data from intensive care unit (ICU) patients with rhabdomyolysis treated with continuous renal replacement therapy combined with Cytosorb cartridge. Patient demographics, etiology of rhabdomyolysis, presence and severity of AKI were registered. The study examined myoglobin and CPK levels at admission and during treatment. Duration of treatment and the number of cartridges used per patient were reported. Additionally, correlations between Cytosorb use and renal function improvement were explored.

Results

Patients' median age was 58 years. 80% of rhabdomyolysis was caused by crush syndrome. At admission median AKI stage was 1. At treatment initiation median values of myoglobin and CPK were 18455 ng/ml and 12126 U/L, respectively. Cytosorb therapy was initiated within a median of 24 hours from ICU admission. The median treatment duration was 24 hours, with a median of 1 cartridge used per patient. At the end of the treatment a significant decrease in myoglobin and CPK levels was observed (median 418 ng/ml, $p=0.007$ and 1396 U/L, $p=0.039$, respectively). In 60% of cases AKI was resolved at discharge, in the remaining AKI stage improved; also, the cumulative daily dose of furosemide reduced significantly (median 120 mg/die vs 20 mg/die, $p=0.04$).

Conclusion

The use of Cytosorb in patients with rhabdomyolysis showed potential benefits in reducing myoglobin and CPK levels, with an improvement in renal function. Early treatment initiation and the number of cartridges used appeared to positively influence clinical outcomes. Further studies are needed to confirm efficacy and establish optimal treatment protocols.

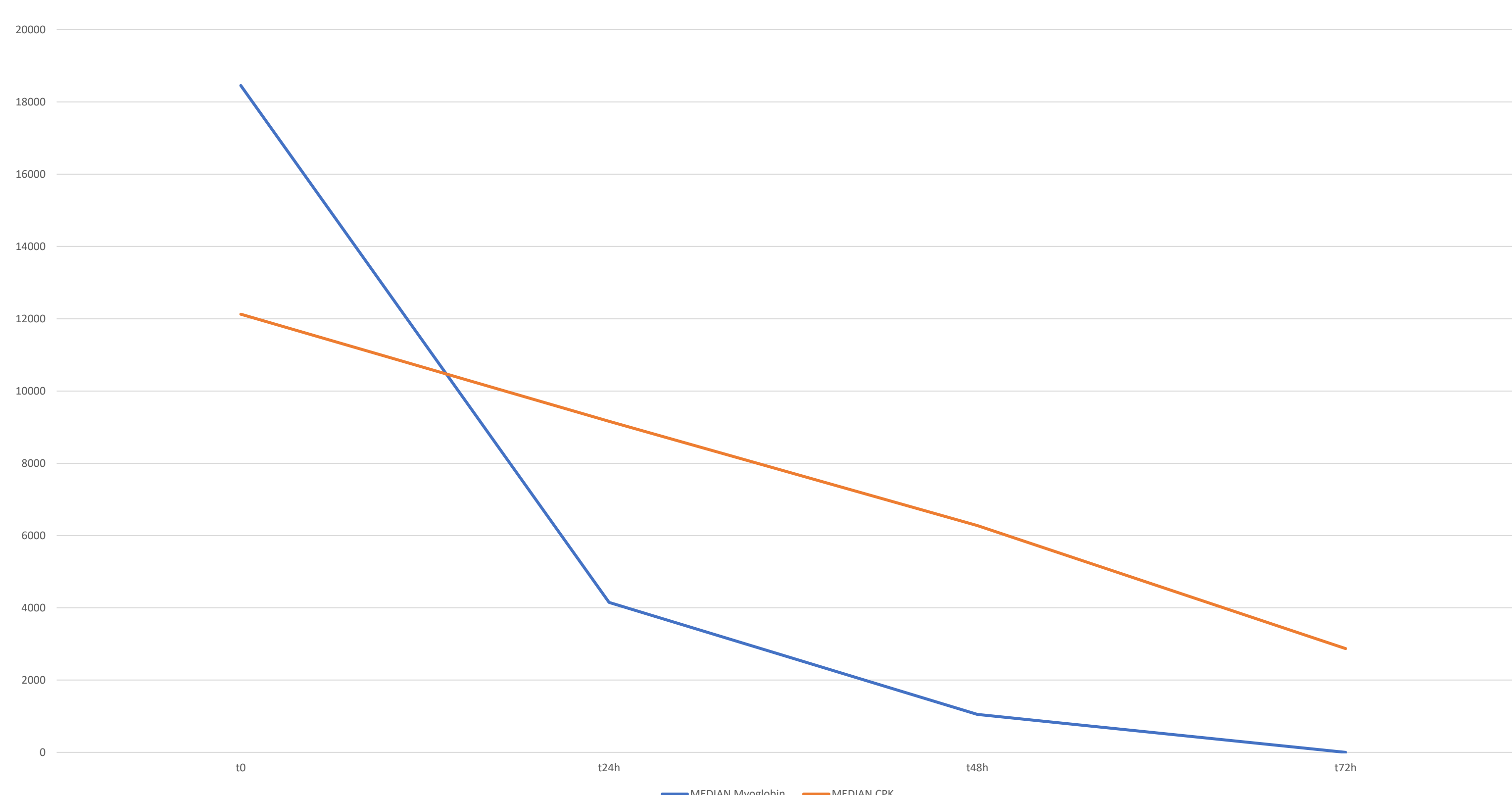


Figure 1: median myoglobin (ng/ml) and CPK (U/L) trend during treatment