

P1123

HEMOPERFUSION COMBINED WITH CRRT IN SEPTIC SHOCK AKI PATIENTS CAUSED BY OSTEOFASCIAL COMPARTMENT SYNDROME

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Background and Aims: Although Osteofascial compartment syndrome is rare, it can cause severe complications, including septic shock and acute kidney injury. Most commonly found on the palmar side of the forearm and lower leg. This article reported two cases of septic shock with acute kidney injury caused by osteofascial compartment syndrome, and explored the application of hemoperfusion combined with continuous renal replacement therapy in these two severe patients.

Method: Two young men, patient A was 38 years old and patient B was 44 years old. Hospitalized in June 2016 and February 2018, respectively. Previous healthy, after questioning, patient A had a history of type 1 diabetes and patient B had a history of gout. Patient A had a history of being beaten by his wife, patient B has no clear history of injury. Patient A showed swelling and pain in the right forearm and patient B showed swelling and pain in the right lower leg. After admission, they quickly developed shock, oliguria, acute kidney injury, multiple organ dysfunction. They were received fluid resuscitation, vasopressors, anti-infectives, respiratory support, nutritional support, and vital signs monitoring. Blood culture of patient A showed a case of group A hemolytic streptococcus, patient B showed streptococcus pyogenes and staphylococcus hemolytic. Patient A was performed CRRT for 3 days, combined with two hours hemoperfusion (HA-330, Jaftron, Zhuhai City, China) on the first day of CRRT, once every 24 hours for two days. Patient B was performed CRRT for 16 days, combined with two hours hemoperfusion (HA-330, Jaftron, Zhuhai City, China) on the first day of CRRT, once every 24 hours for two days. Both patients underwent multiple orthopaedic surgeries. Patient A underwent right upper limb amputation and patient B underwent right thigh amputation.

Results: After hemoperfusion, the amount of norepinephrine was significantly reduced, and the circulation became stable. Finally, two patients improved and were discharged from the hospital, and their renal function returned to normal.

Conclusion: Once the osteofascial compartment syndrome is diagnosed, the fascia should be decompressed immediately. After local incision and decompression, blood circulation is improved, and a large number of toxins from necrotic tissue enter the blood circulation, which can lead to serious complications such as sepsis, shock, acute kidney injury, and multiple organ failure. Renal replacement therapy and amputation surgery may save lives. Hemoperfusion can reduce the amount of norepinephrine, improve circulation and win surgical opportunities.