Tata laksana Nutrisi pada Pasien Luka Bakar Listrik = Nutrition management in electrical burned patients

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Abstrak

Latar Belakang: Kontak tubuh manusia dengan arus listrik dapat mengakibatkan trauma luka bakar. Pada Pasien luka bakar listrik, derajat keparahan trauma yang dialami pada organ dalam tidak sebanding dengan luka bakar di permukaan tubuh, sehingga dapat dikategorikan sebagai luka bakar berat. Terapi nutrisi merupakan bagian integral dalam tata laksana luka bakar sejak awal resusitasi hingga fase rehabilitasi. Saat ini sudah terdapat rekomendasi untuk tata laksana nutrisi luka bakar berat. Namun, belum terdapat rekomendasi yang spesifik mengenai tata laksana pada luka bakar listrik.

Metode: Laporan serial kasus ini menjelaskan empat pasien kasus luka bakar listrik. Pasien mengalami berbagai penyulit yang kemudian mempengaruhi tata laksana nutrisi yang diberikan. Pasien pertama dengan trauma servikal, pasien kedua mengalami AKI dan penurunan fungsi hati, pasien ketiga mengalami syok sepsis, dan pasien keempat mengalami sepsis dan amputasi. Pemberian nutrisi dimulai sesuai dengan kondisi pasien. Target pemberian energi dihitung dengan menggunakan persamaan Harris-Benedict untuk kebutuhan basal, ditambah faktor stres 1,5-2. Protein diberikan 1,5-2 g/kg BB/hari hingga terjadi perbaikan. Karbohidrat dan lemak berturut-turut 60-65% dan <35%. Pemberian nutrisi diutamakan melalui oral dan enteral, sedangkan jalur parenteral hanya digunakan bila diperlukan untuk pemenuhan energi. Mikronutrien yang diberikan berupa multivitamin antioksidan, vitamin B kompleks dan asam folat.

Hasil: Tiga pasien mengalami perbaikan klinis, kapasitas fungsional, dan laboratorium hingga diperbolehkan rawat jalan. Lama perawatan ketiga pasien tersebut berturut-turut 17 hari, 60 hari, dan 20 hari. Satu orang pasien meninggal akibat penyulit yang dialaminya yaitu syok sepsis yang menyebabkan gagal multi organ setelah dirawat selama 14 hari.

Kesimpulan: Tatalaksana nutrisi yang optimal dan tepat sesuai dengan kondisi klinis pasien dapat menurunkan morbiditas dan mortalitas pasien dengan luka bakar listrik.

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Background: Contact to electricity can inflict burn injuries in human. In electrical burn injuries, the damages of the internal organs are not comparable to the burn injuries in the body's surface. Nutrition therapy is an integral part in burn management from the beginning of resuscitation to rehabilitation phase. Currently there have been several recommendations of nutrition management in severe burn injury. However there is still no recommendation that specifically recommend for nutrition management in patients with electrical burn injury.

Methods: The serial case report describes four patients with electrical burn injury. All patients had various complications that affected the nutrition management. First patient with cervical trauma, second patient had

AKI and decreased liver function, third patient had septic shock, and fourth patient had sepsis and amputation. Nutrition was given individualy according to the patient clinical condition. Target of energy given calculated by Harris-Benedict equation for basal requirement with added stress factor 1,5-2. Protein was given 1,5-2 g/kg BW/day except patient with AKI protein restricted to 0,8-1 g/kg BW/day until improvement of renal function. Carbohydrates and lipids were given 60-65% and <35%, respectively. Oral or enteral nutrition was preferred while parenteral nutrition only given if required to meet the energy requirements. Micronutrients supplementation such as antioxidant vitamins, vitamin B complex, and folic acid were provided to patients.

Results: Three patients had the improvement in clinical condition, functional capacity, and laboratory results that allowed them to be discharged and had outpatient treatment. Length of stay of the patients were 17, 60, 20 days respectively. One patient died due to septic shock compilation that lead to multiple organ failure after 14 days of hospitalization.

Conclusion: Optimal and appropriate nutrition management adjusted to patient's clinical condition can reduced morbidity and mortality rate in the electrical burn injury patients.