Tatalaksana nutrisi pasien luka bakar berat dengan trauma inhalasi dan sepsis = Nutritional support in severe burns with inhalation injury and sepsis

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Abstrak

ABSTRAK
 Latar belakang: luka bakar berat dapat disertai dengan trauma inhalasi, yang akan memicu respons lokal dan sistemik, sehingga menyebabkan berbagai komplikasi, termasuk systemic inflammatory response syndrome (SIRS) dan sepsis. Berbagai kondisi ini menyebabkan hipermetabolime dan hiperkatabolisme, yang membutuhkan tatalaksana nutrisi adekuat untuk membantu proses penyembuhan pasien. Berbagai kelompok ahli telah memberikan rekomendasi tatalaksana nutrisi pada luka bakar berat dan sakit kritis. Namun, akibat keterbatasan sarana dan prasarana, tidak semua rekomendasi dapat dilaksanakan, sehingga tatalaksana nutrisi diberikan secara optimal.

Metode: serial kasus ini terdiri atas empat pasien luka bakar berat, yang disebabkan oleh api, dan disertai trauma inhalasi, yang menyebabkan berbagai komplikasi, sepsis, multiple organ dysfunction syndrome (MODS) dan multiple organ failure (MOF). Tatalaksana nutrisi diberikan secara bertahap sesuai dengan keadaan pasien. Pemberian nutrisi diawali dengan nutrisi enteral dini (NED) dalam waktu 2448 jam setelah luka bakar, sebesar 10 kkal/kg BB, menggunakan drip intermiten. Selanjutnya, nutrisi diberikan sebesar 2025 kkal/kg BB pada fase akut dan 2530 kkal/kg BB/hari pada fase anabolik. Setelah pasien keluar dari intensive care unit (ICU), target kebutuhan energi menggunakan persamaan Xie, dengan protein 1,52,0 g/kg BB/hari, lemak 2530%, dan karbohidrat (KH) 5565%. Mikronutrien diberikan berupa multivitamin antioksidan, vitamin B, asam folat, dan vitamin D. Pasien dalam serial kasus ini juga mendapatkan nutrisi spesifik glutamin sebesar 0,3 g/kg BB/hari, selama 510 hari.

Hasil: tiga pasien mengalami perbaikan klinis, kapasitas fungsional, dan laboratorium. Pasien selamat dan dipulangkan untuk rawat jalan. Masa rawat pasien yang selamat berturut-turut 33 hari, 70 hari, dan 43 hari. Seorang pasien mengalami perburukan dan MOF, hingga meninggal dunia setelah dirawat selama 23 hari di ICU.

Kesimpulan: tatalaksana nutrisi optimal dapat menunjang penyembuhan luka serta menurunkan angka morbiditas dan mortalitas pasien luka bakar berat dengan trauma inhalasi dan sepsis.ABSTRACT
 Background: severe burn trauma combined with inhalation injury initiates local

and systemic response, resulting in various complications such as systemic inflammatory response syndrome (SIRS) and sepsis. These conditions stimulate hypercatabolic process, leading to the increase of nutrition requirement. Adequate nutritional support is necessary in order to control both inflammatory and metabolic response, and also to improve healing process. To date, nutritional recommendations specific for severe burn trauma and critical illness have been established. However, many problems including patient?s condition and lack of resources exist, so optimal nutritional support that fits our settings was delivered.

Method: this serial case focused on four severely burned patients caused by flame. Subjects with inhalation trauma and complications such as sepsis, multiple organ dysfunction syndrome (MODS), and multiple organ failure (MOF) were included in this study. Nutritional support was delivered according to clinical conditions, patient?s tolerance, and laboratory findings. Early enteral nutrition was initiated within 2448 hours post burns, starting from 10 kcal/kg BW/day with intermittent gravity drip method. Nutrition was gradually increased in order to reach the target of energy for critically ill patients, which is 2025 kcal/kg BW/day in acute phase or 2530 kcal/kg BW/day in anabolic recovery phase. Xie Equation was used to calculate target of total energy for burned patient. Protein requirement was 1.52.0 g/kg BW/day. Lipid and carbohydrate given were 2530% and 5565% from calorie intake, respectively. Micronutrient supplementation including antioxidants, vitamin B, folic acid, and vitamin D was also provided. Glutamin as specific nutrient was delivered by 0.3 g/kg BW/day in 510 days.

Results: improvement of clinical condition, functional capacity, and laboratory parameters was observed in three patients, who could be discharged from hospital and asked to come back for outpatient care. Their lengths of stay were 33 days, 70 days, and 43 days, respectively. However, one patient experienced worsening of condition and died after 22 days of care in Intensive Care Unit (ICU).

Conclusions: optimal nutritional support for severely burned patients with inhalation trauma and sepsis is necessary in order to improve healing process, as well as decrease morbidity and mortality.

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