

Terapi medik gizi pada pasien luka bakar berat dengan obesitas dan penyulit metabolik = Medical nutrition therapy in severe burn injury patient with obesity and metabolic disease

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Abstrak

Luka bakar berat dapat menyebabkan respons hipermetabolisme dan hiperkatabolisme persisten dan berkepanjangan. Pasien luka bakar yang dirawat di rumah sakit (RS) sering memiliki komorbid, seperti obesitas, diabetes melitus tipe 2 (DMT2), dan hipertensi. Inflamasi kronik akibat obesitas dan komorbid pada luka bakar berat berperan di dalam terjadinya fenomena second hit yang dapat memperberat respons hipermetabolisme. Terapi medik gizi pada pasien luka bakar berat dengan obesitas dan penyulit metabolik bertujuan untuk mencegah penurunan berat badan, mempertahankan massa otot, mengurangi respons hipermetabolisme, menjaga kontrol glikemik dan tekanan darah, meningkatkan sistem imun, membantu penyembuhan luka, memperbaiki kapasitas fungsional, sehingga meningkatkan luaran klinis serta menurunkan risiko morbiditas dan mortalitas. Empat pasien serial kasus dengan luka bakar berat, derajat II-III, 29-38% luas permukaan tubuh (LPT), disebabkan oleh api dan listrik, memiliki status obes I serta komorbid DMT2 dan hipertensi. Terapi medik gizi pada pasien diawali dengan nutrisi enteral dini dalam waktu 24 jam pertama pasca luka bakar, sesuai dengan rekomendasi The European Society for Clinical Nutrition and Metabolism (ESPEN) serta Society of Critical Care Medicine (SCCM) dan American Society for Parenteral and Enteral Nutrition (ASPEN). Terapi medik gizi berdasarkan rekomendasi tersebut disesuaikan kondisi klinis, toleransi asupan, dan hasil laboratorium pasien. Target pemberian nutrisi menggunakan formula Xie, dengan komposisi seimbang, terdiri atas protein 1,5-2 g/kg BB ideal/hari, lemak 25-30%, dan karbohidrat 45-65%. Mikronutrien yang diberikan berupa vitamin B kompleks 3x1, asam folat 1x1 mg, vitamin C 2x250 mg, dan seng 1x20 mg. Keempat pasien serial kasus mengalami perbaikan kondisi klinis, penyembuhan luka baik, tidak ada infeksi dan komplikasi selama perawatan, tekanan darah dan kontrol glikemik baik, penurunan BB < 10%, perbaikan kapasitas fungsional, dan lama rawat pasien lebih singkat. Keempat pasien dipulangkan untuk rawat jalan. Terapi medik gizi yang optimal dapat memperbaiki luaran klinis serta menurunkan angka morbiditas dan mortalitas pasien luka bakar berat dengan obesitas dan penyulit metabolik.

.....Severe burn injury can cause a persistent and prolonged hypermetabolism and hypercabolism response. Severe burn injury patients treated in hospitals generally have comorbidities, such as obesity, DMT2, and hypertension. Chronic inflammation due to obesity and comorbidities in severe burn injury contributes to a second hit phenomenon in terms of augmenting the hypermetabolic response. Medical nutrition therapy in severe burn injury patient with obesity and metabolic disease is required in order to prevent weight loss, maintain muscle mass, reduce hypermetabolism response, maintain glycemic control and blood pressure, improve the immune system, help wound healing, improve functional capacity, therefore increasing clinical outcome and reduce the risk of morbidity and mortality. The case series consists of four patients with severe burn injury, degree IIIII, 2938% total body surface area, caused by fire and electricity, nutritional status obese I with DMT2 and hypertension. Medical nutrition therapy was initiated with early enteral nutrition within the first 24 hours after burn injury, according to ESPEN, SCCM and ASPEN recommendations and

also adjusted based on clinical conditions, nutritional tolerance, and laboratory results. The nutrition target was calculated using Xie formula, with a balanced composition, consists of protein 1.52 g/kg ideal body weight/day, fat 2530%, and carbohydrate 4565%. Micronutrients supplementation given to these patients includes vitamin B complex 3x1 tablets, folic acid 1x1 mg, vitamin C 2x250 mg, and zinc 1x20 mg. Four patients had improvement in clinical condition and wound healing, no infections and complications during treatment, controlled blood pressure and glycemic, decreased body weight <10%, improvement in functional capacity, and shortened length of hospital stay. All four patients were discharged for outpatient care. Optimal medical nutrition therapy can improve clinical outcomes and reduce the morbidity and mortality rates in severe burn injury patients with obesity and metabolic disease.