Terapi Medik Gizi pada Pasien Diabetes Melitus Tipe 2 dengan Sakit Kritis = Medical Nutrition Therapy in Type 2 Diabetes Mellitus Patients with Criticall Illness

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Abstrak

Pasien diabetes melitus tipe 2 (DMT2) berisiko mengalami komplikasi akibat hiperglikemia yang memperberat morbiditas, dan berkontribusi terhadap terjadinya sakit kritis. Tata laksana nutrisi pada kondisi tersebut bertujuan untuk mengatasi hiperglikemia, yang diharapkan dapat meningkatkan luaran klinis, mencegah progresi komplikasi, mempersingkat fase sakit kritis serta lama rawat rumah sakit (RS). Dua dari empat pasien berjenis kelamin perempuan dan siasanya laki-laki, dengan rentang usia 55–67 tahun. Dua pasien mengalami gagal nafas, satu pasien dengan status epileptikus berulang, dan satu pasien dengan perburukan intra operasi sehingga membutuhkan perawatan intensif. Semua pasien mengalami komplikasi DMT2. Status gizi pasien secara berurutan adalah malnutrisi sedang, berat badan lebih, obes I, dan malnutrisi berat. Tiga pasien mendapatkan terapi medik gizi sejak fase akut awal sakit kritis, sedangkan sisanya setelah lebih dari tujuh hari perawatan intensif. Terapi medik gizi yang diberikan selama perawatan intensif, meliputi pemenuhan energi, makronutrien, dan mikronutrien sesuai dengan kondisi klinis, status gizi serta metabolik, dan toleransi asupan pasien. Asupan energi dari keempat pasien di rentang 20–29 kkal/kg BB/hari dan asupan protein mencapai 1,3 g/kg BB/hari. Rerata asupan lemak dan karbohidrat berturut-turut 20–29% dan 51–67% total kalori. Semua pasien mendapatkan mikronutrien sesuai penyakit pasien. Pemenuhan nutrisi spesifik, berupa monounsaturated fatty acid (MUFA) berasal dari nutrisi enteral yang mengandung nutrisi tersebut. Selama perawatan semua pasien masih mengalami hiperglikemia, namun bila dibandingkan dengan awal perawatan, dua pasien telah mengalami perbaikan glikemik dan perbaikan penanda inflamasi serta infeksi, sedangkan sisanya masih mengalami hiperglikemia. Durasi perawatan intensif dan perawatan RS yang lebih panjang ditemukan pada pasien dengan status gizi malnutrisi, kontrol glikemik yang belum baik, dan inflamasi yang belum tertangani. Semua pasien dapat melewati fase sakit kritis dan step down ke ruang rawat biasa. Akan tetapi, dua pasien dengan malnutrisi dan hiperglikemia meninggal dunia di ruangan biasa akibat perburukan infeksi dan inflamasi. Sementara itu, sisanya mengalami perbaikan di ruang rawat biasa dan diizinkan rawat jalan. Keparahan penyakit, komplikasi, morbiditas, status gizi serta metabolik, dan kontrol glikemik memengaruhi luaran klinis dan tingkat mortalitas pada pasien DMT2 dengan sakit kritis.

.....Patients with type 2 diabetes mellitus (T2DM) are at risk of experiencing complications due to hyperglycemia which aggravate morbidity, and contribute to the incidence of critical illness. Nutritional management in this condition aims to overcome hyperglycemia, which is expected to increase clinical outcomes, prevent progression of complications, shorten the critical illness phase and length of hospital stay (LOS). Two out of four patients are female and the rest are male, with an age range of 55–67 years. Two patients experienced respiratory failure, one patient with recurrent status epilepticus, and one patient with intraoperative deterioration requiring intensive care. All patients had complications of T2DM. The nutritional status of the patients was moderate malnutrition, overweight, obese I, and severe malnutrition, in order. Three patients received nutritional medical therapy since the initial acute phase of critical illness,

while the rest after more than seven days of intensive care. Nutritional medical therapy that is given during intensive care, includes the fulfillment of energy, macronutrients, and micronutrients in accordance with the clinical condition, nutritional and metabolic status, and tolerance of patient intake. Energy intake of the four patients ranged from 20–29 kcal/kg BW/day and protein intake reached 1.3 g/kg BW/day. The mean intake of fat and carbohydrates was 20–29% and 51–67% of total calories, respectively. All patients received micronutrients according to the patient's disease. The fulfillment of specific nutrients, in the form of monounsaturated fatty acids (MUFA), comes from enteral nutrition that contains these nutrients. During treatment, all patients still had hyperglycemia, but when compared to the initial treatment, two patients had improved glycemic control, inflammatory and infection marker, while the rest still had hyperglycemia. Longer duration of intensive care and hospitalization was found in patients with malnourished nutritional status, poor glycemic control, and unwell treated inflammation. All patients can pass through the critical illness phase and step down to regular ward. However, two patients with malnutrition and poor hyperglycemia died in the regular ward due to worsening infection and inflammation. Meanwhile, the rest were allowed outpatient care. Disease severity, complications, morbidity, nutritional and metabolic status, and glycemic control affect clinical outcomes and mortality rates in critically ill T2DM patients.