

## Tatalaksana nutrisi pada pasien traumatic brain injury dengan berbagai penyulit = Nutrition management in traumatic brain injury with various comorbidities

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### Abstrak

[<b>ABSTRAK</b><br>

#### Pendahuluan:

Pada traumatic brain injury (TBI) dapat terjadi peningkatan metabolisme sehingga pasien rentan mengalami malnutrisi. Tatalaksana nutrisi yang adekuat sesuai dengan kondisi klinis dan komorbiditas berperan dalam mencegah terjadinya malnutrisi, menurunkan morbiditas dan mortalitas, serta mengoptimalkan outcome neurologis.

#### Presentasi Kasus:

Keempat pasien dalam serial kasus ini adalah laki-laki berusia antara 31?60 tahun dengan TBI dan berbagai faktor penyulit. Pasien pertama dengan obesitas dan mengalami hiponatremia berulang selama perawatan, pasien kedua memiliki status gizi malnutrisi, pasien ketiga dengan riwayat kemoradiasi pada astrositoma, amiloid angiopati dan disfagia, sementara pasien keempat dengan hipertensi dan fibrilasi atrium. Skrining gizi dengan MST pada keempat pasien menunjukkan skor dua. Pemberian energi pada keempat pasien adalah sebesar 140?150% dari kebutuhan energi basal yang dihitung dengan Harris-Benedict, dengan target pemberian protein sebesar 1,5?1,9 g/kg BB/hari atau setara dengan 20% energi. Selama pemantauan asupan protein pada keempat pasien adalah sebesar 0,55?1,67 g/kg BB/hari atau setara dengan 13,1?19,5% energi. Restriksi cairan dilakukan pada pasien pertama sebagai tatalaksana hiponatremia yang diperkirakan terjadi akibat SIADH. Pemberian natrium pada pasien keempat tidak direstriksi meskipun pasien mengalami hipertensi karena hipertensi adalah salah satu mekanisme kompensasi pada TBI. Pasien ketiga mengalami disfagia jika mengasup air putih sehingga dilakukan latihan menelan. Asupan per oral dimulai pada hari ke 6?15 pasca trauma.

#### Hasil:

Keempat pasien menunjukkan perbaikan outcome neurologis yang tampak berdasarkan peningkatan skor GCS disertai peningkatan kapasitas fungsional. Kesimpulan: Tatalaksana nutrisi yang adekuat pada pasien TBI dengan mempertimbangkan komorbiditas pasien diperlukan untuk menunjang penyembuhan dan memperbaiki outcome pasien.

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<b>ABSTRACT</b><br>

#### Background:

Hypermetabolism in traumatic brain injury (TBI) increase the risk of malnutrition. Adequate nutritional management based on clinical status and comorbidity reduces the risk of malnutrition, therefore reduces morbidity and mortality rate and improves neurological outcomes.

#### Case Presentation:

The four patients included in this serial case were male, 31?60 years old. All patients were diagnosed with TBI complicated by various comorbidities. The first patient was obese with recurrent episode of

hyponatremia during hospitalization, the second patient was malnourished, the third patient had history of chemoradiation due to astrocytoma and was diagnosed with angiopathy amyloid and dysphagia, while the fourth patient was diagnosed with hypertension and atrial fibrillation. The MST scores in all four patients were two. Target of energy provision were between 140–150% of predicted basal energy requirement and target of protein provision were 1,5–1,9 g/kg BW/day or equal to 20% of energy. The protein intake during monitoring were 0,55–1,67 g/kg BW/day or equal to 13,1–19,5% energy. The fluid intake was restricted in first patient due to SIADH- related hyponatremia. Sodium intake was not restricted for the fourth patient even though the patient was diagnosed with hypertension. In TBI, hypertension could occur due to compensational mechanism. The third patient was having difficulties consuming water due to dysphagia, and was conducted to multiple swallowing therapy exercises. Oral intake in four patients were initiated in day 6–15 post trauma.

Result:

There were improvement of neurological outcome shown by the higher GCS score and improvement of the functional capacity in all four patients Conclusion: Adequate nutritional management in TBI patient can support the recovery and improve patient's outcome. Nutritional management should consider patient's

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