

Korelasi proporsi asupan energi dan protein dari nutrisi Parenteral Dibandingkan Asupan Total dengan Imbang nitrogen pasien pascalaparotomi elektif = The correlation between proportion of energy and protein intake from parenteral nutrition to total intake with nitrogen balance in elective Post-Laparotomy patients

Hendra, author

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Abstrak

Latar Belakang: Katabolisme pascalaparotomi menyebabkan imbang nitrogen negatif dan diduga tidak dapat dicegah dengan pemberian nutrisi. Nutrisi parenteral dapat meningkatkan faktor anabolisme. Belum diketahui apakah proporsi asupan energi dan protein dari jalur parenteral terhadap asupan total berkorelasi dengan imbang nitrogen pasien pascalaparotomi elektif.

Metode: Studi potong lintang dilakukan di Rumah Sakit Cipto Mangunkusumo (RSCM) pada pasien pascalaparotomi elektif yang memperoleh supplemental parenteral nutrition (SPN) antara 3 hari pertama pascalaparotomi. Pemeriksaan nitrogen urea urin (NUU) dilakukan terhadap pasien dengan asupan 12 kkal/kg BB pada hari ketiga pascalaparotomi. Pasien dengan gangguan ginjal dan hati tidak disertakan dalam penelitian.

Hasil: Rerata imbang nitrogen hari ketiga pascalaparotomi sebesar $-2,8 \pm 3,8$ g/hari, dengan median asupan energi 19 (12–34) g/kg BB dan protein 0,9 (0,4–1,9) g/kg BB. Proporsi asupan energi dari jalur parenteral sebesar $0,51 \pm 0,26$ dan protein $0,59 \pm 0,28$. Tidak ditemukan korelasi signifikan pada proporsi asupan energi dan protein dari jalur parenteral terhadap asupan total dengan imbang nitrogen. Korelasi signifikan ditemukan pada variabel total asupan energi ($r = 0,697$, $p < 0,001$) dan protein ($r = 0,808$, $p < 0,001$) dengan imbang nitrogen.

Kesimpulan: Pemberian SPN dini penting dalam mencapai total asupan energi dan protein untuk mengimbangi kehilangan nitrogen hari ketiga pascalaparotomi elektif di RSCM meskipun korelasi proporsi asupan nutrisi dengan imbang nitrogen belum tampak pada penelitian ini.

.....Background: Post-laparotomy catabolism causes a negative nitrogen balance and is unlikely prevented by nutritional intervention. Parenteral nutrition can increase anabolic factor. It is not known whether the proportion of energy and protein intake from parenteral nutrition to total intake correlates with nitrogen balance in elective post-laparotomy patients.

Methods: A cross-sectional study was conducted at Cipto Mangunkusumo Hospital in elective post-laparotomy patients who received supplemental parenteral nutrition (SPN) within first 3 days after laparotomy. Urine urea nitrogen (UUN) examination was performed on patients with intake 12 kcal/kg BW on the third day after laparotomy. Patients with renal and hepatic impairment were excluded. Results: The mean nitrogen balance on the third day post-laparotomy was -2.8 ± 3.8 g/day, with median energy intake of 19 (12–34) g/kg BW and protein 0.9 (0.4– 1.9) g/kg BW. The proportion of energy intake from the parenteral route was 0.51 ± 0.26 and protein was 0.59 ± 0.28 . No significant correlation was found in the proportion of energy and protein intake from the parenteral nutrition to total intake with nitrogen balance. Significant correlations were found for total energy intake ($r= 0.697$, $p < 0.001$) and protein ($r= 0.808$, $p < 0.001$) with nitrogen balance. Conclusion: Early administration of SPN is important in achieving total

energy and protein intake to compensate nitrogen loss on the third day after elective laparotomy although the association between the proportion of nutrition intake and nitrogen balance has not been observed in this study.