

# Peran terapi gizi adekuat pasca bedah pada kadar glukosa sewaktu dan malondialdehyde plasma pasien bedah digestif = Effect of postoperative adequate nutrition therapy on plasma glucose and malondialdehyde levels in digestive surgery patients

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## Abstrak

Penelitian ini merupakan uji klitis paralel, membandingkan kelompok yang mendapat terapi gizi adekuat pascabedah (P) dengan kelompok yang mendapatkan diet standar RSUPNCM (K). Sebanyak 17 pasien pascabedah digestif yang dirawat di ruang perawatan bedah kelas III RSUPNCM yang memenuhi kriteria dibagi dalam dua kelompok secara randomisasi blok. Data yang diambil dari catatan medik pada awal perlakuan meliputi usia jenis kelamin, lama operasi, jenis operasi skor ASA, dan jumlah perdarahan. Data asupan energi dan protein dengan food record pemeriksaan antropometri (BB, PB dan IMT), dan laboratorium (kadar GDS dan MDA plasma) dilakukan pada awal dan akhir perlakuan. Analisis data menggunakan uji t tidak berpasangan dan uji Mann Whitney dengan batas kemaknaan 5%.

Sebanyak 9 orang kelompok P dan 8 orang kelompok K dengan rata-rata usia  $38,82 \pm 10,89$  tahun mengikuti penelitian secara lengkap. Jenis operasi terbanyak yang dijalani subyek adalah reseksi-anastomosis. Lama operasi: subyek perlakuan tergolong lama dan subyek kontrol tergolong singkat. Jumlah perdarahan tergolong sedikit. Data awal tidak menunjukkan perbedaan bermakna ( $p > 0,05$ ). Setelah enam hari perlakuan, didapatkan persentase asupan energi dan protein dibandingkan kebutuhan total termasuk kategori adekuat pada kelompok perlakuan dan tidak adekuat pada kelompok kontrol, dan perbedaan ini bermakna ( $p < 0,05$ ). Pada kedua kelompok didapatkan peningkatan kadar ODS plasma yang lebih tinggi pada kelompok kontrol, namun secara statistik tidak bermakna ( $p > 0,05$ ). Pada kelompok perlakuan terdapat penurunan kadar MDA plasma sedangkan pada kelompok kontrol terdapat peningkatan MDA plasma, meskipun secara statistik tidak bermakna ( $p > 0,05$ ).

Pada kedua kelompok didapatkan peningkatan kadar GDS plasma yang lebih tinggi pada kelompok kontrol, namun secara statistik tidak bermakna serta didapatkan penurunan MDA plasma pada kelompok perlakuan penelitian ini memperlihatkan terapi gizi dapat memperbaiki stres metabolik dan oksidatif dibandingkan tanpa terapi gizi.

The study was a parallel randomized clinical trial which compared the treatment group received postoperative adequate nutrition therapy (P) and the control group received hospital standard diet (K). Seventeen subjects postoperative digestive surgery admitted to Surgery Ward of Dr. Cipto Mangunkusumo Hospital fulfilled the study criteria, were divided into two groups using block randomization. Data collection taken from medical record at the beginning of intervention were age, gender, duration of surgery, type of surgery, ASA score, and the amount of blood loss during surgery. Data of energy, and protein intake using food record, anthropometric (body weight, body length, and body mass index); and laboratory findings (plasma glucose and malondialdehyde levels) were done before and after intervention. For statistical analysis, unpaired t-test and Mann Whitney were used. The level of significance was 5%. Nine subjects in the treatment group and eight subjects in the control group whose mean of age is  $38.82 \pm 10.89$  years old completed the study. The most type of surgery was resection-anastomosis. The

duration of surgery was categorized as longtime in P and shortish in K groups. The amount of blood loss during surgery was little for both groups. The characteristic of the two groups were closely matched at base line ( $p > 0.05$ ). After six days intervention, the percentage of energy and protein intake in treatment group were adequate in appropriate to the requirement, and these were statistically significant compared to control group ( $p < 0.05$ ). There were increase of plasma glucose levels in both groups which was higher in control group, however the increase was not statistically significant ( $p > 0.05$ ). Plasma levels of MDA were decrease in treatment group while in control group were increase eventhough the changes between the two groups were not statistical significant ( $p > 0.05$ ). There were increase of plasma glucose level which was higher in the control group, although has not statistically significant, and there were decrease of plasma MDA levels in treatment group. This study revealed that nutrition therapy can improve metabolic and oxidative stress better than those without nutrition therapy.