

Formula Enteral Berbahan Dasar Tepung Biji Labu Kuning (*Cucurbita moschata*) Sebagai *Medical Food* Pasien Stroke

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ABSTRAK

Latar belakang : Stroke merupakan gangguan neurologis yang dapat menimbulkan disfagia dan malnutrisi, sehingga memerlukan intervensi gizi berupa formula enteral yang sesuai kebutuhan pasien. Formula enteral berbasis bahan lokal yang terjangkau dan bergizi lengkap menjadi alternatif penting dibanding formula enteral komersial.

Tujuan : Untuk mengetahui karakteristik kandungan gizi, sifat fisik, dan daya terima dari formula enteral NeuroPump yang diformulasikan untuk mendukung kebutuhan gizi pasien stroke.

Metode : Penelitian eksperimental menggunakan Rancangan Acak Lengkap (RAL) dilakukan pada tiga variasi formula enteral NeuroPump. Analisis kandungan gizi meliputi densitas energi, karbohidrat, protein, lemak, serat pangan, dan kolin. Sifat fisik diukur melalui viskositas dan osmolaritas. Daya terima dievaluasi melalui uji hedonik pada 20 panelis semi-terlatih untuk warna, aroma, rasa, tekstur, dan keseluruhan. Analisis data menggunakan uji Kruskal-Wallis dan dilanjutkan Mann-Whitney dengan tingkat signifikansi $p < 0,05$.

Hasil : Tidak terdapat perbedaan signifikan pada densitas energi, karbohidrat, protein, dan lemak antar tiga variasi formula ($p > 0,05$). Formula F1 memiliki kadar serat 50,04 g/1000 mL dan kolin 105,29 mg/1000 mL. Viskositas dan osmolaritas antar formula tidak berbeda signifikan ($p > 0,05$). Dari aspek organoleptik, warna dan tesktur tidak berbeda signifikan, sementara aroma dan rasa menunjukkan perbedaan signifikan, dengan formula NeuroPump mendapatkan skor “suka” yang lebih baik dibanding formula enteral komersial.

Simpulan : Formula enteral NeuroPump memiliki kandungan gizi yang sesuai untuk pasien stroke, meskipun karbohidrat F3 dan serat F1 lebih tinggi serta kadar lemak seluruh formula cenderung lebih rendah sehingga perlu pengaturan pemberian. Seluruh formula memiliki viskositas rendah, sementara pada osmolaritas hanya F3 yang sesuai standar. NeuroPump memiliki daya terima yang baik dibandingkan formula enteral komersial.

Kata Kunci : Formula enteral, stroke, nilai gizi, sifat fisik, daya terima.

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Pumpkin Seed (*Cucurbita moschata*) Flour Enteral Formula as Medical Food for Stroke Patients

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ABSTRAK

Background : Stroke is a neurological disorder that may cause dysphagia and malnutrition, thereby requiring appropriate enteral nutrition intervention. Locally sourced enteral formulas that are affordable and nutritionally complete represent an important alternative to commercial enteral products.

Objective : To determine the nutritional characteristics, physical properties, and acceptability of the NeuroPump enteral formula developed to support the nutritional needs of stroke patients.

Methods : An experimental study using a completely randomized design was conducted on three variations of the NeuroPump enteral formula. Nutritional analysis included energy density, carbohydrate, protein, fat, dietary fiber, and choline. Physical properties were assessed through viscosity and osmolarity measurements. Acceptability was evaluated using a hedonic test involving 20 semi-trained panelists assessing color, flavor, taste, texture and overall appearance. Data were analyzed using the Kruskal–Wallis and Mann–Whitney tests with a significance level of $p < 0,05$.

Results : No significant differences were observed in energy density, carbohydrate, protein, and fat content among the three formula variations ($p > 0,05$). Formula F1 contained high dietary fiber (50,04 g/1000 mL) and choline (105,29 mg/1000 mL). Viscosity and osmolarity did not differ significantly among formulas ($p > 0,05$). Organoleptic evaluation showed no significant differences in color and texture, while flavor and taste differed significantly, with NeuroPump formulas achieving higher “liked” scores than the commercial enteral formula.

Conclusion : The NeuroPump enteral formula provides appropriate nutritional composition for stroke patients, although higher carbohydrate content in F3 and elevated dietary fiber in F1, along with relatively lower fat content across formulas, require controlled administration. All formulas demonstrated low viscosity, while F3 had acceptable osmolarity. NeuroPump had good overall acceptability compared to commercial enteral formulas.

Keywords : Enteral formula, stroke, nutritional composition, physical characteristics, sensory acceptance.

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