PENGEMBANGAN FORMULA ENTERAL UNTUK PASIEN STROKE: ANALISIS GIZI, OSMOLARITAS, VISKOSITAS, DAN UJI ORGANOLEPTIK DI RSUD PROF. DR MARGONO SOEKARJO

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ABSTRAK

Latar belakang: Formula enteral merupakan formula yang diberikan pada pasien yang tidak dapat memenuhi kebutuhan gizi melalui rute oral. Penelitian ini bertujuan untuk mengembangkan formula enteral modifikasi bernama FERS StrokeEase Nutrition untuk mendukung pemulihan pasien stroke. Formula ini dirancang menggunakan bahan-bahan alami seperti kacang hijau, susu skim, minyak zaitun, putih telur, dan apel.

Metode: Jenis penelitian ini yaitu penelitian eksperimental dengan desain deskriptif komparatif, yaitu membandingkan dua variabel atau lebih. Pengukuran dilakukan terhadap kandungan nutrisi, osmolaritas, viskositas, serta uji organoleptik menggunakan metode *Triangle* Test. Pengumpulan data dilakukan melalui penghitungan nilai gizi bahan, analisis sifat fisik formula, dan uji sensoris oleh panelis agak terlatih. Penelitian ini dilakukan di Instalasi Gizi Rumah Sakit Dr. Soekarjo Margono.

Hasil: Analisis menunjukkan bahwa FERS memiliki viskositas sebesar 1,4 cP dan osmolaritas 420 mOsm/L, keduanya memenuhi standar formula enteral. Kandungan nutrisi FERS dalam satu resep mencakup energi 275,7 kkal, protein 15,4 gram, lemak 5,3 gram, dan karbohidrat 40,8 gram. Melalui uji *Triangle*, ditemukan bahwa modifikasi formula memberikan perbedaan signifikan pada rasa, kekentalan, dan warna, namun tidak pada aroma. FERS juga terbukti lebih ekonomis dibandingkan formula enteral komersial dengan tetap mempertahankan kualitas nutrisi yang sesuai.

Kesimpulan: Formula non komersial sudah memenuhi syarat atau standar untuk formula enteral yang mencakup kandungan gizi, osmolaritas, dan viskositas. Namun melalui uji sensoris, formula enteral rumah sakit belum dapat setara dengan formula komersial. Hasil penelitian ini diharapkan dapat menjadi alternatif formula enteral yang lebih terjangkau dan sesuai kebutuhan klinis pasien stroke.

Kata Kunci: Enteral, Stroke, Gizi, Osmolaritas, Viskositas, Organoleptik

DEVELOPMENT OF AN ENTERAL FORMULA FOR STROKE PATIENTS: NUTRITIONAL ANALYSIS, OSMOLARITY, VISCOSITY, AND ORGANOLEPTIC TESTING AT PROF. DR. MARGONO SOEKARJO REGIONAL GENERAL HOSPITAL

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ABSTRACT

Background: Enteral formula is a nutritional formula provided to patients who cannot meet their nutritional needs through oral intake. This study aims to develop a modified enteral formula named FERS StrokeEase Nutrition to support the recovery of stroke patients. The formula is designed using natural ingredients such as mung beans, skim milk, olive oil, egg whites, and apples.

Methods: This study is an experimental study with a descriptive-comparative design, comparing two or more variables. Measurements were conducted on nutritional content, osmolarity, viscosity, and organoleptic tests using the Triangle Test method. Data collection included nutritional value calculations, analysis of the physical properties of the formula, and sensory testing by semi-trained panelists. The study was conducted at the Nutrition Installation of Dr. Soekarjo Margono Hospital.

Results: The analysis showed that FERS had a viscosity of 1.4 cP and an osmolarity of 420 mOsm/L, both meeting the standards for enteral formulas. The nutritional content of FERS per recipe includes 275.7 kcal of energy, 15.4 grams of protein, 5.3 grams of fat, and 40.8 grams of carbohydrates. The Triangle Test revealed that the modified formula showed significant differences in taste, thickness, and color but not in aroma. FERS was also found to be more cost-effective compared to commercial enteral formulas while maintaining appropriate nutritional quality.

Conclusion: The non-commercial formula meets the requirements or standards for enteral formulas in terms of nutritional content, osmolarity, and viscosity. However, sensory testing revealed that the hospital-made enteral formula has not yet achieved parity with commercial formulas. The findings of this study are expected to offer an alternative, more affordable enteral formula tailored to the clinical needs of stroke patients.

Keywords: Enteral, Stroke, Nutrition, Osmolarity, Viscosity, Organoleptic