KEMENTERIAN KESIHATAN MALAYSIA

Research Proposal

Referrals to Dietitian: A comparison of cases in Hospital Sultan Haji Ahmad Shah (HoSHAS), Temerloh during Covid-19 pandemic vs prior to pandemic year

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1 INTRODUCTION

1.1 Background

Medical nutrition therapy is an important management tool for a number of acute and chronic conditions, and dietitians are trained specifically in the field of applying nutrition therapy to medical conditions. Much dietetic input into acute disease management is undertaken in secondary care, mainly hospitals, but dietetic involvement in chronic disease, especially lifestyle-related chronic disease, is dealt with predominantly in the primary care sector too.

1.2 Importance of Study

The importance of nutrition during hospitalization have been recognized as one of most influential factors for complementary of medical treatment of hospitalized patients especially patients on liquid diet, Ryle's Tube Feeding.

Maximizing nutrition is important for individuals to receive adequate nutritional care in the hospital setting, it is critical that healthcare staff refer at-risk patients to dietitian without delay. In most countries, referrals to dietitian are conducted solely by physicians. This is based on the assumption that physicians are sufficiently trained and able to recognize a need for nutritional intervention in their patients

As the studies among children in Malaysia is limited, this will be the first study patients on liquid diet that been referred to dietitian in HoSHAS during pandemic vs non-pandemic Covid-19.

1.3 Objectives

1.3.1 Main Objective

To investigate the pattern of patients on liquid diet that been referred to dietitian in Hospital Sultan Haji Ahmad Shah (HoSHAS) during pandemic vs non-pandemic Covid-19

1.3.2 Specific Objectives

1. To describe demographic of patients that been referred to dietitian in HoSHAS during pandemic vs non-pandemic Covid-19
2. To determine the calories of patients on liquid diet that been referred to dietitian in HoSHAS during pandemic vs non-pandemic Covid-19
3. To investigate the percentage of achievement at least 75% from total energy patients on liquid diet that been referred to dietitian in HoSHAS during pandemic vs non-pandemic Covid-19

1.4 Overall hypothesis

1.4.1 Null Hypothesis, H_0

There is no significant difference between patients that been referred to Dietitian in Hospital Sultan Haji Ahmad Shah (HoSHAS) during pandemic vs non-pandemic Covid-19

1.4.2 Alternative Hypothesis, H_A

There is a significant difference between patients that been referred to Dietitian in Hospital Sultan Haji Ahmad Shah (HoSHAS) during pandemic vs non-pandemic Covid-19

2 LITERATURE REVIEW

2.1 Nutrition in hospitalized patients

Nutrition have a strong influence on the acquisition and maintenance of hospitalized patients with the appropriate nutritional supply to expedite their recovery and prevent complications.

In recent years, reports suggesting a resurgence of the importance of nutrition in recovery o patients. Well-nourished people can more easily avoid diseases and recover faster from a disease.

Currently, the dietary pattern and intakes of Malaysian hospitalized patients on liquid diet are yet to be widely explored. The pattern of patients on liquid diet that been referred to Dietitian in Hospital Sultan Haji Ahmad Shah (HoSHAS) during pandemic vs non-pandemic Covid-19 years will be study further.

2.2 Dietary intake among hospitalized patients

Diet is a modifiable risk factor for recovery and plays an important role in the acquisition and maintenance of healthy patients. It is one of potential factors which influence recovery includes apart from treatment, sleep/ rest, hydration and other activity factor.

lts from studies in adolescents provide evidence of a possible adverse effect of vitamin D deficiency and insufficiency for bone health in children.[83, 84, 87]

There is a need to consider various continuous strategies for improvement of bone health in adolescents, particularly from the family lifestyle, as well as education by healthcare professionals such as physicians. Dietitians are responsible in providing evidence-based dietary and physical activity advice as part of the lifestyle interventions for them.

3 METHODOLOGY

3.1 Study design

This is a cross-sectional, retrospective study that will collect a primary new data. Subjects will be recruited from Hospital Sultan Haji Ahmad Shah (HoSHAS).

This study will apply for approval by NMRR medical ethics committee (MEC).

The expected duration for this study, which will last for 2 years. 1 year prior to Covid-19 outbreak, another year during Covid-19. Thus, there will be sufficient number of participants in this study.

3.2 Study Respondents

3.2.1 Sampling

The study will use a convenient sampling design. A complete list of the patients on liquid diet that been referred to the dietitians in Hospital will be the sampling frame. The selected patients will be based on the criteria in this study. Patients on liquid diet either fully on Ryle's tube feeding or fully on liquid diet through oral, using Oral Nutritional Supplements (ONS) formula. Data will search back in the system.

3.2.2 Sample size calculation

The sample size will be minimum of 30

To prevent insufficient sample size due to missing data, a 30% non-response rate added to n:

30 x 130% = 39 ≅ **40**

Thus, 40 subjects will be recruited in this study via a convenience sampling method, based on the name lists of students who attend school during the survey period.

3.2.3 Characteristics of respondents

The inclusion criteria for this study adult who admitted to Hospital Sultan Haji Ahmad Shah (HoSHAS), referred to Dietitians & on liquid diet. Preerable not initiated yet and not more than day-3 on ully liquid diet.

3.3 Nutritional assessments

3.3.1 Dietary intake

Dietary intake of an individual are commonly accessed via dietary recalls, records, history and food frequency questionnaire (FFQ). Different methods are used under different circumstances. In this study, 3-day diet records will be used to estimate the dietary intake of subjects, which has been reported as a fairly accurate with respect to the foods consumed,

minimum omissions and recording bias in subjects. Dietitian will review the subjects and will calculate the calories require or the patients. Further clarification and explanation on their liquid diet will be needed will be asked from nurses in charge. The dietary intakes of the eligible patients will be analyzed using Nutritionist ProTM Diet Analysis software with up-to-date database from Malaysian Food Composition Tables, food and nutrient data, diabetic exchanges, MyPyramid and MyPlate servings.

3.3.2 Physical Evaluation

The related anthropometric measurements will be taken by certified and well-trained Dietitians. The heights of subjects will be measured without socks and shoes using a calibrated vertical steadiometer (Seca Portable 217, Seca, UK) to the nearest millimeter (0.1 cm). Body mass index (BMI) is calculated as weight in kilograms divided by the square of height in meters.

3.4 Questionnaire

Sociodemographic data and clinical profile required will be collected.

3.5 Data Analysis and Statistical Methods

All the data will be analyzed using SPSS software for Windows (Version 20.0, Chicago, IL, US). Qualitative variables will be described as frequencies and percentages. Demographics background of all subjects will be summarized via descriptive statistics. Other than that, descriptive statistics will also be used to determine the mean and standard deviations (SD) of dietary intakes of the subjects.

The chi-square tests will be used to examine categorical data if there are differences in comparing groups. While to compare two groups for quantitative variable, the t-test will be used if variances are equal and non- parametric Mann-Whitney-U test were used if otherwise. On the other hand, the normality of data will be tested using non-parametric Kolmogorov-Smirnov analysis.

The ANOVA procedure will be used for comparing more than two groups, and where necessary, the non-parametric Kruskal-Wallis test will be used. Multiple linear regressions will be performed separately by gender to determine the relationship between body composition measurements and selected variables. A significance level of $P<0.05$ is consider as statistically significant.

3.6 Work Schedule

Time / Activities	2023											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Literature review												
Refine proposal												
Preparation of tools (forms, etc)												
Data collection												
Data entry												
Data exploration, cleaning												
Data analysis												
Write up												
Publication												

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