NUTRITIONAL ASSESSMENT OF CARDIOVASCULAR DISEASED PATIENTS AND DIETARY COUNSELLING

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ABSTRACT

Background: Cardiovascular disease (CVD) is a major cause of disability and premature death throughout the world. According to WHO, cardiovascular disease is defined as "A class of diseases that affect the heart and blood vessels (arteries and veins)". In the majority of cases, this is due to the progressive effects of atherosclerosis in the arteries.
Aim: The present study was undertaken to assess nutritional status of cardiovascular disease patients admitted in hospital and providing dietary counselling to avoid further complications
Methods: Purposive random sampling was done, 60 subjects (30 Vegetarians and 30 Non-vegetarians) were enrolled for the present study from Care hospitals (Hyderabad). The nutritional status was assessed through anthropometric measurements, nutritional risk index, and statistical analysis by't' test
Results: The results showed that 45percent of the subjects had normal BMI (18.5-29.9) and 45percent were found to be overweight with BMI >25kg/m^2 and 10percent were obese BMI>30kg/m^2 Nutritional risk index was found to be 100percent (<83.5) indicating all the subjects at risk of malnutrition.
Keywords: Cardiovascular Disease, Nutritional Risk Index, Malnutrition, Body Mass Index

INTRODUCTION

[1]Cardiovascular disease is today the largest single contributor to global mortality and will continue to dominate mortality trends in the future.[2]People with diabetes have a more than two fold greater risk of fatal and non-fatal CVD. [3] Data indicate that poor diet, tobacco use, physical inactivity, excess alcohol use and psychosocial factors are major contributors to CVD diseases. [4]Increased body mass index (BMI) is also associated with greater risk of stroke in both Asian and Western populations.

AIMS AND OBJECTIVES

1. To assess nutritional status of cardiovascular disease patients using anthropometric measurements and nutritional risk index.
2. To counsel the patients for modifying dietary habits and physical activity practices.

MATERIAL AND METHODS

Selection of sample: The subjects between the age group of 30-75 years diagnosed with cardiovascular diseases were selected for the study.
Size of sample: Through purposive random sampling 60 subjects (30 vegetarians and 30 non vegetarians) with different cardio vascular diseases were included in the study.
Tools: Weighing Machine (Measurements in Kg), Height Scale (Measurements In Cms),
BMI (Wt. (kg) / Ht (m) 2, NRI = (1.519 * Serum Albumin g/dl) + (41.7 * Present Weight/Ideal Body Weight)

STATISTICAL ANALYSIS

Results
Table 1, Shows that 80percent of subjects with CVD are in the age group of 45-75years with 36 males and 12 females. The results are on par with the results of Pekka Jousilahti et al in 1998 which say CHD risk increases with age, but the increase is sharper in women.

Table 1: Distribution of subjects according to their age

Age	N=60	Males (n=43)	Females (n=17)
30-45	12(20)	7(16)	5(29)
45-60	34(57)	24(56)	10(59)
60-75	14(23)	12(28)	2(12)

The figures indicated in parenthesis are percentages.

Table 2, Shows that 45percent of the subjects had normal BMI (18.5-24.9) in which 89percent are males and 11percent are females and 47percent are vegetarian and 43percent are non-vegetarians. Overweight category (25-29.9) .Comprised of 45percent in which 55percent are males and 45percent are females and 52percent are vegetarians and 48percent are non-vegetarians. The obese category (>30) comprises of 10% in which 66% are males and 34percent females and 33percent are vegetarian and 64percent are non-vegetarians.

Table.2: Distribution of subjects according to their Body Mass Index (BMI)

BMI	N=60	Males (n=43)	Females (n=17)	Vegetarian (n=30)	Non-vegetarian(n=30)
<18.5	0(0)	0(0)	0(0)	0(0)	0(0)
18.5-24.9	27(45)	24(56)	3(18)	14(47)	13(43)
25-29.9	27(45)	15(35)	12(70)	14(47)	13(43)
>30	6(10)	4(9)	2(12)	2(7)	4(14)

The figures indicated in parenthesis are percentages.

Table 3, clearly explains that 100percent of the subjects are at major risk which includes 72percent males and 28percent females

Table 3.Distribution of subjects according to their Nutrition Risk Index (NRI)

NRI	N=60	Males (n=43)	Females (n=17)	Vegetarian (n=30)	Non vegetarian (n=30)
<83.5 (Major Risk)	60(100)	43(100)	17(100)	30(100)	30(100)
83.5-97.5 (Moderate Risk)	0(0)	0(0)	0(0)	0(0)	0(0)
97.5-100 (Mild Risk)	0(0)	0(0)	0(0)	0(0)	0(0)
>100 (No Risk)	0(0)	0(0)	0(0)	0(0)	0(0)

The figures indicated in parenthesis are percentages.

Table 4: Results of‘t’ test analysis for NRI of vegetarian subjects

	Vegetarians			
NRI	Estimated values Mean ± SD	Normal values	Calculated “t” values	Normal “t” values
NRI	51.5 ± 4.86	>100	*55.11	2.04

*Significance at 5%level

Table 5: Results of "t" test analysis for NRI of non-vegetarian subjects

	Non Vegetarians			
NRI	**Estimated values Mean ± SD**	**Normal values**	**Calculated "t" values**	**Normal "t" values**
NRI	51.2 ± 8.05	>100	*33.19	2.04

***Significance at 5%level

CONCLUSION

From the present study it can be concluded that the age group 45-75 years had a peak incidence of CVD. 55percent of the subjects were overweight and 100percent of the subjects are at the risk of malnutrition, the nutritional risk index was statistically significant in both vegetarian and non-vegetarian subjects (p>0.05), indicating major risk of malnutrition in present study subjects. Hence counselling was given to the patients for modifying dietary habits and lifestyle practices in order to prevent malnutrition, to avoid further complications and increased risk of mortality.

ACKNOWLEDGEMENT

I would like to thank Care hospitals for undertaking the study and special thanks to my parents for all the support.

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