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A Study on Assessment of Knowledge and Attitude of Surgical Residents Towards Nutritional Support

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ABSTRACT
Combination of pre-existing malnutrition (often due to the surgical pathology itself), a period of acute starvation prior to surgery and the metabolic responses to surgery makes surgical patients candidates for early nutritional intervention. Up-40% of all patients are undernourished at admission to Hospital, half of which goes unrecognized, Two-thirds of all patients will lose weight during hospitalization. Numerous surveys have highlighted deficiencies in the knowledge based on topics related to nutritional support amongst hospital physicians and other healthcare workers, there is limited data on surgeons. The study was conducted among residents of general surgery department at hospitals attached to Bangalore Medical College and Research Institute, Bangalore. Responses were assessed after obtaining clearance from the institutional ethical committee. Data collected was entered into Google sheets. Analysed using SPSS software, ver. 20.0. 67% of participants agreed that they had adequate knowledge to identify patients at risk of malnutrition. Whereas only 34% could answer regarding the MUST for adults. Only half of the participants agreed that they were able to calculate the energy needs of their patients. Almost all the participants agreed that training in nutritional therapy would be invaluable.

INTRODUCTION

It is a well-known fact that surgical patients with a suboptimal nutrition status have impaired wound healing, impaired immune responses, increased organ dysfunction, delayed recovery and increased morbidity and mortality. The combination of pre-existing malnutrition, often due to the surgical pathology itself, a period of acute starvation prior to surgery and the metabolic responses to surgery makes surgical patients candidates for early nutritional intervention. Up-40% of all patients are undernourished at admission to Hospital, half of which goes unrecognized. In addition, two-thirds of all patients will lose weight during hospitalisation[1]. The prevalence of malnutrition in surgical patients may be even higher, with up-65% of patients undergoing gastrointestinal surgery being reported to be malnourished[2,3]. It has also been demonstrated that poor nutritional status singularly can lead to adverse outcomes following surgery[3,4]. Furthermore, optimal nutritional status both pre and postoperatively is a key factor in reducing perioperative complications and improving surgical outcomes[5,6]. The attending surgeons should therefore have sufficient knowledge of nutrition and be sensitive about the nutritional status about their patients. Whilst numerous surveys have highlighted deficiencies in the knowledge base on topics related to nutritional support amongst hospital physicians and other healthcare workers, there is limited data on surgeons.

MATERIALS AND METHODS

Source of Data: The study was conducted among residents of general surgery department at hospitals attached to Bangalore Medical College and Research Institute, Bangalore.

Study Design: Cross sectional study.

Study Period: July 2023-August 2023. A questionnaire was circulated among surgical residents of BMCRI using Google forms and responses were assessed after obtaining clearance from the institutional ethical committee.

Data collected was entered into Google sheets.

Analysed using SPSS software, ver. 20.0.

Kolmogorov-Smirnov test, skewness was used to test the normality of the data (50<n>300).

Categorical variables are expressed in terms of frequency (n) and percentage (%).

Chisquare test was used to compare categorical variables.

p<0.05 considered as statistically significant.

RESULTS AND DISCUSSIONS

Total of 55 participants.

Response rate of 64%.

Questionnaire being circulated among 84 residents.

- Chi-square test indicates no significant difference in knowledge level among the students from different years
- Chi-square value: 2.0192
- p-value: 0.73

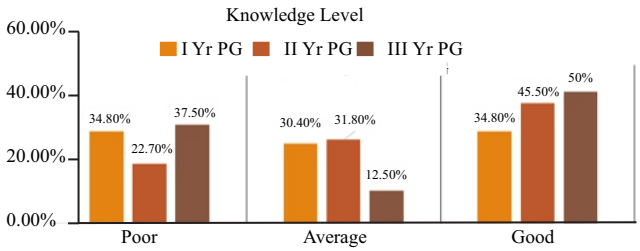

Fig. 1: Knowledge level v/s Pg year

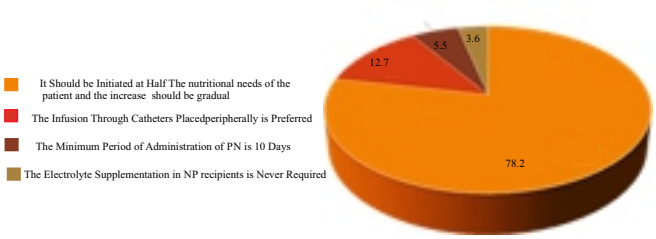

Fig. 2: On Parenteral Nutrition

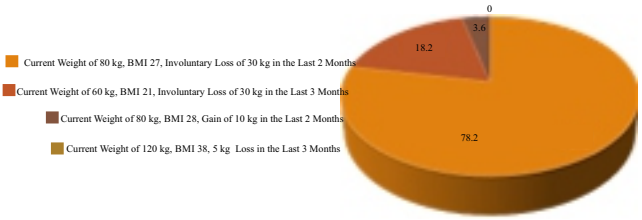

Fig 3: In a nutritional screening at elective hospital admission, which patient listed below is at greater risk of malnutrition?

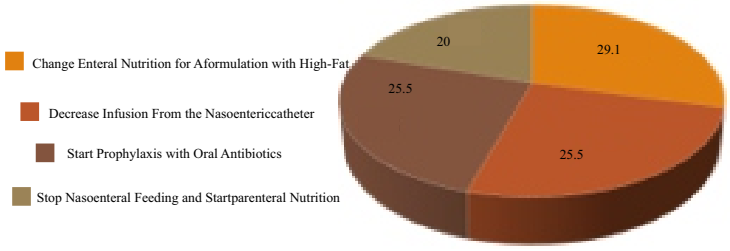

Fig 4: A more appropriate conduct in case of diarrhea during feeding through a nasoenteric catheter is

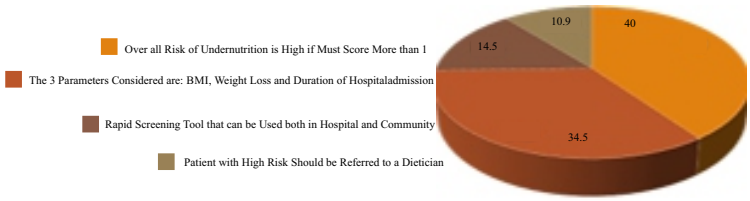

Fig 5: regarding malnutrition universal screening tool for adults, the false statement is

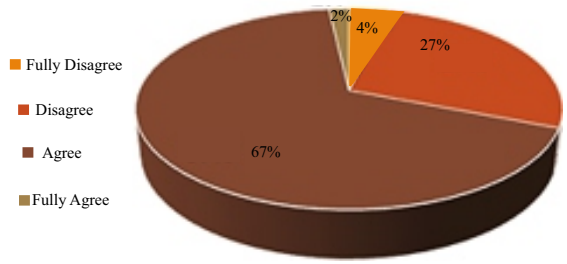

Fig.6: I have adequate knowledge and skills identify patients at risk of malnutrition

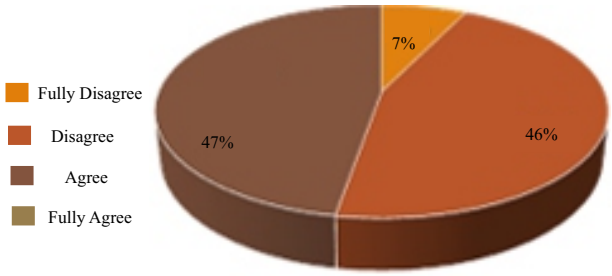

Fig.7: I am able to Calculate the Daily Energy Needs and Nutritional Support of my Patient

Table 1: Number of PG

PG year	Frequency
I	23
II	22
III	10
Total	55

Table 2: Knowledge level

Knowledge Level	Frequency	Percent
Poor (0-6)	16	30.2
Average (7-9)	15	28.3
Good (10-16)	22	41.5
Total	53	100.0

Table 3: I Feel I Have Adequate Knowledge of Nutrition Therapy in Surgical Patients

I feel I have adequate knowledge of nutrition therapy in surgical patients		
Year of Training	**Frequency**	**Percent**
Strongly disagree	2	8.7
Disagree	14	60.9
Agree	7	30.4
Total	23	100.0
Strongly disagree	1	4.5
Disagree	13	59.1
Agree	8	36.4
Total	22	100.0
Disagree	4	40
Agree	6	60
Total	10	100.0

Max no of correct responses were to the questions regarding initiation of parenteral nutrition and identification of malnutrition in patients.

- 56% of participants felt that they had adequate knowledge regarding nutritional therapy in patients
- 56% agreed that they regularly decided on nutritional interventions in their patients
- Whereas the knowledge level was assessed to be good in 40% of participants only
- Only 38% agreed that they have received adequate information and guidelines regarding the same
- 67% of participants agreed that they had adequate knowledge to identify patients at risk of malnutrition
- Whereas only 34% could answer regarding the MUST for adults
- Only half of the participants agreed that they were able to calculate the energy needs of their patients
- Almost all the participants agreed that training in nutritional therapy would be invaluable

Awad *et al.,* a comparative study to investigate the knowledge and attitudes of UK surgical trainees towards nutritional suppor, compared their responses with qualified dieticians. Mean [SE] test scores lower for doctors. Only 47% of doctors felt they had adequate knowledge of this subject, 65% stated that they regularly made decisions on nutritional support. An observational cross sectional study by Bozkirli BO, Gundogdu RH *et al.,* aiming to define the current attitudes of surgeons toward nutritional screening and support. A questionnaire with 13 questions was e-mailed to 1500 surgeons in different hospitals of Turkey. Response rate only 20.9%, major limitation of the study. Better responses of surgeons, who participated in at least one scientific meeting on nutrition per year, more coherent with the nutrition guidelines[7]. Paulo DA, de Oliviera BMR *et al.,* a comparative study to analyse the knowledge of nutritional therapy (NT) of surgery residents and surgeons of Sao Paulo Hospital. More than 80% did not feel safe regarding NT and 46% denied knowledge of the NT multi disciplinary team (NTMT). The study concludes that there are gaps in medical education as only 13.3% were confident about NT and their knowledge did not justify such confidence[8,9]. Despite making decisions related to nutritional support regularly, surgical doctors in the demonstrated less knowledge of the fundamental principles of nutritional support. The level of knowledge indicates gaps in medical education on nutritional therapy since no significant difference noted in various levels of seniority. Poor nutritional status singularly can lead to adverse outcomes following surgery[3,4]. Optimal nutritional status both pre and postoperatively is a key factor in reducing perioperative complications and improving surgical outcomes[5].

CONCLUSION

Lack of adequate knowledge in surgical trainees regarding nutritional therapy, identification and treatment of malnutrition in patients was identified.

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