Summary

In critically ill patients, malnutrition is associated with impaired immune function, impaired ventilatory drive, and weakened respiratory muscles, leading to prolonged ventilatory dependence and increased infectious morbidity and mortality.

Nutritional support may be enteral or parenteral nutrition, enteral nutrition (EN) means using the gastrointestinal tract for the delivery of nutrients, which includes eating food, consuming oral supplements and all types of tube feeding. The route of EN most often used in ventilated patient is nasogastric tubes (NGT), total parenteral nutrition (TPN) should only be administered if there is a clinical reason that the gastro-intestinal tract should not be used, as there is more risk of infection and it provokes the acute-phase inflammatory response.

The benefits of nutrition support in the critically ill include improved wound healing, a decreased catabolic response to injury, improved gastrointestinal structure and function, and improved clinical outcomes, including a reduction in complication rates and length of stay, with accompanying cost savings.

Role of the nurse is daily nutritional assessment by, physical examination, review of nutritional support schedule, review of laboratory results and anthropometric measurements also monitoring of enteral and parenteral nutrition

Aim of the study:

This study aimed to assess the nutritional status for mechanically ventilated patients in intensive care unit at Benha university hospital through:

1-Assessing the actual nutritional support schedule assigned for ventilated patients in intensive care unit at Benha university hospital.

2-Monitoring the response of ventilated patients to actual nutritional support schedule utilized.

Research questions:

1-What is the actual nutritional support schedule assigned for ventilated patients in intensive care unit at Benha university hospital?

2-What is the response of ventilated patients to the actual nutritional support schedule utilized in intensive care unit at Benha university hospital?

Subjects and Methods

Research setting:

This study was conducted in intensive care unit at Benha University Hospital.

Subjects:

Convenience sample from adult male and female ventilated dependent patients in intensive care unit at the six month of the study, not less than one week on ventilator and with other different diagnoses and all dietitian specialists with different experience years who work at Benha University Hospital. (Number=10 dietitians).

Tools of the study: Three tools will be used for data collection.

1- Questionnaire will be used, it include the following parts:

A1-Sociodemographic data **A2-**medical history

B-Patient record

2-Anthropometric measurements (mid arm circumference & mid arm muscle circumference & triceps skin foldness).

3- Assessment sheet for dietitian specialists

Result*:*

The results of the study showed that:

- The majority of sample were aged 61 years and above and more half of them were males and most of them had cerebro vascular stroke and infarction
- In relation to duration of mechanical ventilation, about two thirds of subjects under mechanical ventilation for 7-10 days.
- Regarding to nutritional support schedule, the majority of subjects were feeding by enteral route combined with parenteral nutrition.
- Regarding laboratory values, this study revealed that about three quarter of sample had low albumin level and this may be due to in adequate intake of protein and calories, majority of sample had high level of BUN and majority of subjects had low Hgb level.
- The results of this study revealed that there are no statistical significant differences between anthropometric measures and duration of mechanical ventilation.
- The present study revealed that the subjects who fed by formula (fluid& cooked food) suffered from vomiting, diarrhea, bleeding more than the subjects who fed by fluids only or by total parental nutrition.

- Regarding to role of dietitian, the result revealed that the dietitian specialists don't practice their effective role in determining nutritional plan for every patient.

Conclusion: It's concluded from this study that:

- Enteral nutrition through nasogastric tube is the preferred route for nutritional support for mechanically ventilated patients in ICU.
- Components of food either fluids only such as yoghurt and juice or combined with cooked food.
- The subjects who fed by formula (fluid& cooked food) suffered from vomiting, diarrhea, bleeding more than the subjects who fed by fluids only or by total parental nutrition.
- The dietitian specialists don't practice their effective role in determining nutritional plan for every patient

Recommendation:

1. Revision of the nutritional schedule utilized within the constraints of critical illness at ICU is highly recommended.
2. Written nutritional schedule should be available in each ICU of different hospital
3. Assessment of nutritional status and nutritional therapy should be a part of the overall management of the ventilated patients and must be routinely entered in the patient's medical record and nursing notes and regularly update.
4. The hospital must activate role of the dietitian specialists' in determining plan of diet for every patient.