Utilization of Total Parenteral Nutrition in a South Indian Tertiary Care Hospital

Mathews V1; Nair S1, John Preshanth P1, Vijaynarayana K1, Rodrigues G2, Thunga G1.

1Department of Pharmacy Practice, Manipal College of Pharmaceutical Sciences, Manipal University, Manipal, India.
2NMC Specialty Hospital, Dubai, United Arab Emirates.

1. Introduction

- Total Parenteral Nutrition (TPN) is an essential pharmaceutical preparation in hospitalized patients to whom enteral feeding is not possible or for critical patients with compromised gastrointestinal tract.

- TPN is reported to reduce the incidence of malnutrition which is a leading complication to various medical and surgical conditions. This is a life saving, supportive and expensive therapy.

Objective:

- To assess TPN utilization in surgical in-patients and its outcomes.

2. Method

- This was a retrospective study of 120 surgical in-patients receiving TPN from Jan 2011 to Dec 2012 in a tertiary care hospital

- Patients who met the inclusion criteria were included in the study.

- Data on patients demographics, information on diagnosis, indication, duration, infections, route of administration, length of hospital stay and cost were collected from the patient medical records and hospital pharmacy data base

- The 2002 ASPEN guidelines was followed to classify 'appropriate' and "inappropriate" prescription of TPN.

- Data were analyzed using SPSS version 20.0 (SPSS, Inc., Chicago IL).

3. Results

- The study population consisted of 120 patients.

- The mean age of patients was 48.9±17.7 years.

- Majority of patients 67.5% were males, of the total 120 patients taking TPN 40.8% were surgery patients followed by those diagnosed with intestinal obstruction.

- Major metabolic complication was found to be hypemateremia 26.5% followed by hyperglycaemia.

- Patients recovery rate was found to be higher in those who received TPN peripherally (79.5%) than who received TPN centrally.

- 31.9% of deaths were observed in patients with infections with TPN usage than without.

- 93% of TPN starts were considered to be "appropriate" indications and the rest "inappropriate".

- Total avoidable charges was found to be 2,48,200 Indian Rupees.

- Surgical patients who were indicated with TPN is depicted in figure 2

4. Conclusions

- We could establish few areas which needed focus so as to maintain quality of patient care

- A thorough nutritional assessment was lacking in the study patients which is clearly indicated and reported in all established guidelines.

- Calorific need and requirement should be therefore tailor made individually which was not noticed in our study.

- The broader outcome of this preliminary study would be the potential utility of this data in designing strategies both at the level of physicians and the administrators for rational prescribing and policy decisions respectively.

5. References
