

Audit of Total Parenteral Nutrition in an Adult Surgical Intensive Care

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Abstract

Introduction: A preliminary one-year review of total parenteral nutrition (TPN) in the adult surgical intensive care unit (SICU) in view of its complications, cost and lack of consistent benefits in the critically ill. **Materials and Methods:** All the case records of patients receiving TPN in the SICU starting from first January to end December 1998 were studied. **Results:** Fifty patients received TPN during the study period. Four case records were unavailable. The indications for starting TPN were comparable with those set up by the Stanford University Hospital. Sepsis with gastrointestinal failure at 30.5% [95% CI, 17.7% to 45.8%] was one of the major indicators for TPN use and also the biggest contributor to mortality (50%) [95% CI, 35% to 65%]. Hyperglycaemia and line sepsis increased with duration of TPN use. Pneumonia, bacteraemia and wound infection peaked by the second week. Patients receiving TPN for inadequate and delayed enteral feeding fared better with 45.8% survival [95% CI, 30.9% to 61%]. None of the patients with polytrauma or malignancy cachexia died. 52.2% [95% CI, 37% to 67.1%] survived to be discharged from hospital. Caloric requirements were calculated using Harris-Benedict's equation and estimated using 30 to 35 kcal/kg/day. 64.3% were overfed and 50% received excessive non-protein calorie-to-nitrogen ratio. Ninety-eight per cent and 81% received less than the recommended amino-acid and glucose, respectively. Fifty-eight per cent received adequate lipids. **Conclusion:** This audit highlights the shortcomings in TPN prescription and characteristics of the attendant complications. Efforts must be directed towards encouraging uniformity and level of practice standards.

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