Author's response to reviews

Title: The Effects of Long-Term Total Parenteral Nutrition on Gut Mucosal Immunity in Children with Short Bowel Syndrome: A Systematic Review

Authors:

Beyhan Duran (beyhan.duran@uconn.edu)

Version: 8 Date: 23 October 2004

Author's response to reviews: see over
Dear Dr. Sigalet and Dr. Kursheed,

I did some final mechanical changes in this version starting with Background 4th paragraph on pg 4 through the final paragraph before Methods on pg 14. I have reorganized these paragraphs between Background and Method section to make paragraphs more coherent and easy-to-follow.

The following changes I have made:

- In the abstract, under “Results of Data synthesis” section, I changed the second. Now it reads, as “Based on the literature review, there is no direct evidence suggesting that TPN promotes bacterial overgrowth, impairs neutrophil functions, inhibits blood's bactericidal effect, causes villous atrophy, or causes to death in human model.”
- In the background section, second paragraph, second sentence changed to, A number of independent experimental studies have been carried out shown that intravenous TPN negatively influences gut barrier functions and mucosal immunity while withholding nutrients by mouth or enteral tube feeding, after the resection of small intestine.
- Article, “The” was removed from “Following injury” in the second sentence under The Effects of Surgery or Trauma on Mucosal Immunity on pg 10.
- A new paragraph was included as, “D-Lactate Acidosis” on pg 14.
- Discussion section was divided to subsections as, bacterial translocation, IgA, hyperglycemia, enteral versus parenteral nutrition, effects of early enteral feeding on bacterial translocation, and immunonutrition—this section was revised. Heyland’s immunonutrition study on elective surgery (adult pts) in critical care was removed from this version and replaced with all studies on short gut pts
- “Implications for evidence-based nursing practice” section was expanded. Now it provides more practical information and nursing considerations on both TPN and tube feeding for practicing nurses and clinicians.

Review Outline

Abstract

Background

Anatomy and Physiology of the Gastrointestinal Immune System
- Mucosal Defense System
  1. Nonimmune Antibacterial Factors
  2. Immunological Factors

The Effects of Surgery or Trauma on Mucosal Immunity

Complications of SBS
- Bacterial Overgrowth
- D-lactate Acidosis

Methods

Selecting and Appraising Studies for Systematic Review
- Research Question
- Sample
- Data Analysis

Results

1. Sepsis
2. Impaired Immune Functions: *In vitro* studies
3. Mortality
4. Duration Of Dependency On TPN After Bowel Resection
5. Villous atrophy
Discussion
- Bacterial Translocation
- IgA
- Hyperglycemia
- Enteral versus Parenteral Nutrition
- Effects of Early Enteral Feeding on Bacterial Translocation
- Immunonutrition

Implications for Evidence-Based Nursing Practice
- Multidisciplinary Nutritional Team
- Clinical Management
- Dietary Management
- Monitoring Enteral Feedings and Verifying Tube Location
- Monitoring TPN Complications

Conclusion

Acknowledgements

Thank you very much for your gracious time and your GREAT comments on my paper.

Sincerely,

Beyhan Duran, RN, BS