Summary and conclusion

TPN is a palliative, but life-saving treatment for patients with terminal and irreversible intestinal failure. During the last decade, intestinal transplantation has become the most realistic alternative to prolonged TPN therapy.

Over a period of only 3 decades, intestinal transplantation has evolved from an experimental field to a standard therapeutic option for many patients with intestinal failure. Intestinal transplantation is primarily a pediatric procedure; approximately two thirds of intestinal transplants have been performed in children.

Intestinal transplantation is a relatively young field with a typically slow learning curve. From 1964 through 1970, 8 attempts at clinical intestinal transplantation were reported. All of the recipients died of complications directly related to the surgical procedure; only 1 survived for more than a month.

Since these initial efforts, outcomes have dramatically improved and intestinal transplantation programs have been implemented worldwide. During the latter half of the 1990s, intestinal transplantation became more successful and widespread, particularly over the last 5 years, as a result of the release of the immunosuppressive agent tacrolimus (TAC). Pre-TAC patient survival ranged from 0% to 28%; graft survival rates were 0% to 11%. Long-term graft and patient survival rates now exceed 50% in

large series; outcomes are better in isolated intestinal than in liver-small bowel and multivisceral transplantation.

Intestine transplantation comprises 3 types of operative procedures that are adapted to the needs of the patient. These procedures include isolated small bowel transplantation, a composite graft of the liver and small bowel, and a multivisceral transplant including the small bowel with liver, stomach, and/or pancreas.

The outcomes have markedly improved as a result of considerable clinical experience, advances in immunosuppression and antimicrobial therapy, and refinements in surgical techniques. Nutritional autonomy can be achieved after successful intestine transplantation, making it the standard therapy for patients with intestinal failure and complications resulting from TPN. Most adults are able to maintain adequate nutrition status and children achieve normal growth.

The clinical and nutritional management of the intestine transplant recipient is complex and requires a great deal of expertise. Acute rejection, sepsis, dehydration, and malabsorption are still common problems that influence the recipient's quality of life.

Conclusion:

Significant progress has been made in small bowel transplantation over the past decade as it has advanced from an experimental strategy to a feasible alternative for those patients with permanent intestinal failure and complications associated with the underlying disease and/or TPN. Further refinements and improvements in immunosuppressive protocols, surgical techniques, infection management and prophylaxis, as well as early patient referral and appropriate patient selection are crucial to maximize outcomes.

Intestinal transplantation offers the hope of increased longevity and improved quality of life to adults and children with intestinal failure and life-threatening complications of chronic TPN.