

# General practitioner prescribing of total parenteral nutrition at home

A.J. MACDONALD-BROWN, MRCS, MRCGP  
General Practitioner, Tunbridge Wells

**SUMMARY.** An increasing number of patients, returning to the community after major surgical procedures, receive short- or long-term total parenteral nutrition at home. As total parenteral nutrition is initiated by specialist hospital centres patients may find themselves a considerable distance from that centre when they return home. The hospital may therefore relinquish responsibility for funding the supply of parenteral fluid to a more local source.

This report describes how total parenteral nutrition can be managed by a general practitioner.

## Introduction

HOME total parenteral nutrition has been available in the USA and Europe for nearly 15 years and in the UK for seven years from specialist centres. Patient selection and administration techniques have been described by several authors.<sup>1-3</sup> Ward and colleagues summarized these techniques in 1984 and estimated the cost of hospital treatment to be £55 000 per annum per patient compared with £20 000 per annum for home treatment.<sup>4</sup> Keighley and MacGregor have described the implications of home total parenteral nutrition to a rural practice — the parenteral fluid for their patient was supplied by a hospital pharmacy.

## Case history

The patient, a 29-year-old Caucasian male, moved into the practice area with a diagnosis of metastatic adenocarcinoma of the colon. He had been treated in a specialist unit with a combination of surgery, chemotherapy and radiotherapy, and this had resulted in a recurrent iatrogenic intestinal obstruction, managed with a jejunostomy. A short bowel syndrome had resulted and self-administered total parenteral nutrition was commenced.

On discharge from hospital the patient was receiving 3 l of parenteral fluid over nine hours each night, via a volumetric pump. In addition he required three intravenous additives, six oral drugs and 25 nursing items related to total parenteral nutrition. He also maintained his own routine jejunostomy care.

The options for the supply of parenteral fluid were:

1. The local district hospital pharmacy.
2. A package deal arrangement between the district health authority and a pharmaceutical company able to provide parenteral fluid and medical and nursing supplies for home total parenteral nutrition.
3. An agreement with the pharmaceutical company to supply parenteral fluid only, on National Health Service prescription (FP10), the remaining supplies being obtained from a local pharmacy, also on an FP10, and from the district community nursing services.

A case conference was held involving the patient, the district

nursing officer, the district pharmaceutical officer, the district community physician, the administrator for community nursing aids and the general practitioner. It became clear that the district hospital drug budget and the time-consuming manpower needed to make up the parenteral fluid in the hospital pharmacy would be limiting factors. The cost of the entire pharmaceutical contract would be in the region of £2400 per month. The first two options were considered unacceptable on the grounds that this was a community problem, and therefore the third option was selected, thereby maintaining a regular supply of fluid but placing the financial burden on the family practitioner services.

After contacting the Kent Family Practitioner Committee and the Prescription Pricing Authority (Newcastle) it was ascertained that FP10 prescribing of the fluid would be passed despite the fact that it was strictly speaking for nutritional purposes. Each prescription written was for a two-week supply of parenteral fluid, and the FP10 was posted to the pharmaceutical company one week in advance of when it was required. The fluid was delivered to the patient's home by the company and stored in a large refrigerator loaned by the hospital.

The patient's bedroom was converted into a small intensive care unit, with bed, volumetric pump, refrigerator and open shelving, which was used to store the ancillary nursing equipment required to administer intravenous fluid on an intermittent basis with aseptic techniques. The equipment was obtained through close cooperation with the community nursing services, who made deliveries at prearranged times. This flexibility of supply and demand enabled the patient to return to work, commuting to the city of London, five months after discharge from hospital.

## Conclusion

The circumstances that brought this patient back into the community were unusual and he posed a problem. However, with the cooperation and expertise of the community nursing services it became feasible for a general practitioner to supervise and prescribe parenteral nutrition at home.

## References

1. Milewski PJ, Gross E, Holbrook I, *et al.* Parenteral nutrition at home in management of intestinal failure. *Br Med J* 1980; **280**: 1356-1357.
2. Home parenteral nutrition in England and Wales. *Br Med J* 1980; **281**: 1407-1409.
3. Jackson MA. Long-term home parenteral nutrition. *Br J Hosp Med* 1983; **29**: 105-116.
4. Ward MW, Harrison RA, Doyle J, Clark CG. Parenteral nutrition at home. *Practitioner* 1984; **228**: 831-833.
5. Keighley BD, MacGregor AR. Total parenteral nutrition at home: the implications for a rural practice. *J R Coll Gen Pract* 1980; **30**: 354-357.

## Acknowledgements

I wish to thank the patient and his wife, the members of the Tunbridge Wells Community Nursing Service, Mrs O. Longhurst, District Pharmaceutical Officer, Tunbridge Wells, Unicare Medical Services Limited, and my secretary, Mrs Jane Langrish.

## Address for correspondence

Dr A.J. Macdonald-Brown, 25 Culverden Park, Tunbridge Wells, Kent TN4 9QT.