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How often are short courses of parenteral nutrition unnecessary?

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Parenteral nutrition (PN) for ≤5 d may be a marker for unnecessary use of this technically complex and expensive intervention. The aim of this study was to evaluate current PN prescribing in a tertiary referral centre, to identify the frequency and indications for short-term PN (≤5 d).

Children receiving PN over a 12-month-period were identified from a prospective database. Detailed case note review of patients receiving PN for ≤5 d was performed by a multi-disciplinary group in order to review clinical history and indications for PN. 26/109 patients received PN for ≤5 d. Reasons for an attenuated course were as follows:

1. Planned commencement of PN (e.g. post-operative, diagnosis suspicious of NEC, etc) followed by unanticipated improvement in clinical status, allowing enteral nutrition to be advanced faster than expected (10/26).
2. Unanticipated prolonged ileus with subsequent improvement in enteral tolerance after the introduction of PN (11/26).
3. Unanticipated death (5/26).

Review of the literature highlights inconsistency between guidelines regarding the commencement of PN. Clinicians need to find a balance between unnecessary use of PN with its attendant complications, and avoiding starvation with its associated negative effects. There is little evidence regarding the minimum duration of PN likely to provide clinical benefit. Although 24% of patients received PN for ≤5 d, in all cases the clinical decision to institute this treatment appeared to be reasonable. The total number of PN days in this subgroup represented only 4.9% of the total PN days for all patients reviewed.

In a unit with a specialist PN prescribing pharmacist and nutrition support team, there was little evidence to suggest unnecessary use of PN. We recommend PN prescribing under the aegis of a nutrition support team with clinical assessment on an individual patient basis, taking into account age, diagnosis and nutritional reserve.

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