Abstract:

Purpose: Delivery of home parenteral nutrition (HPN), traditionally via tunneled central venous catheters (CVCs) is associated with several complications, the commonest being catheter related bloodstream infections. We have reviewed the literature to investigate the use of arteriovenous fistulae (AVF) as a viable alternative to traditional routes for long-term parenteral nutrition (PN).

Methods: A literature search was performed using the Medline database, PubMed and a Google Scholar search. Search terms (keywords) used were: parenteral AND nutrition AND arteriovenous AND fistula for Title and Abstract. Our search yielded 12 articles (1972-2012). Two were excluded because of foreign language and difficult retrieval. The final yield was 10 papers.

Results: There were four case reports, six original papers (one Swedish, one French – both excluded), one abstract and one letter to the editor. There were 19 native AVF, 11 bovine grafts (BG), four synthetic grafts (SG) and 10 autologous venous grafts (AVG). The maximum recorded length of use was 86, 54, 16.7 and 300 months, respectively.Complication rates per fistula calculated from literature were 0.47, 1.18, 2.0 and 0.3 respectively. Apart from these results, a recent retrospective study (13) of 62 AVFs for HPN patients revealed an infection rate far lower than all types of CVC and a slightly higher occlusion rate than long-term CVCs.

Conclusions: There is relatively little data regarding this method. AVFs have been used successfully for HPN in patients with poor vasculature, on hemodialysis or recurrent line sepsis. This technique perhaps warrants more thorough exploration. Further research is required.