

Malnutrition Matters, Joint BAPEN and Nutrition Society Meeting, 2nd and 3rd November 2010, Harrogate

Taurolidine lock reduces the incidence of catheter-related bloodstream infections in patients on home parenteral nutrition: a retrospective analysis

P. S. Cullis and R. F. McKee

Lister Department of Surgery, Glasgow Royal Infirmary, Glasgow G4 0SF, UK

Catheter-related bloodstream infections remain the single most important threat to successful long-term home parenteral nutrition. Taurolidine has proven an effective means of reducing the incidence of such infections in patients receiving haemodialysis and intravenous chemotherapy. Until recently, the role of taurolidine lock in preventing catheter-related bloodstream infections in patients receiving home parenteral nutrition was unclear but promising. A randomised control trial⁽¹⁾ has convincingly demonstrated its efficacy in this group of patients in the Netherlands.

We carried out a retrospective analysis of all patients in our centre's home parenteral nutrition database in order to enlighten us to the benefits of taurolidine lock in the west of Scotland. It has been our policy to add taurolidine lock to the catheters of patients who have had recurrent catheter-related bloodstream infections. We obtained the following data from the database: patient identity, age, gender, underlying diagnosis, indication for parenteral nutrition, line insertion and removal dates, line complication details, particularly for infections, and whether or not taurolidine lock had been commenced.

The clinical data of 49 patients on home parenteral nutrition were available from our database. Of the 49 patients on home parenteral nutrition managed by our centre, 7 patients have been changed to taurolidine lock indefinitely since 2002. We calculated that in patients not on the taurolidine lock system, 2.36 proven infections occurred per 1000 catheter days, compared with 0.55 proven infections per 1000 catheter days in those where the system was being used. Furthermore, of the 101 proven infections in non-taurolidine catheter lines, a causative micro-organism was isolated in 89 cases on our database. Thirty-seven percent were caused by *Staphylococcus epidermidis*, 28% by coliforms, 16% by yeasts and 15% by *Staphylococcus aureus*. All proven infections in the taurolidine lock were caused by *S. epidermidis*. We also noted that infections were by far the most frequent complication in patients on home parenteral nutrition as expected, with line blockage, thrombosis and damage occurring at frequencies of 0.2, 0.15 and 0.15 per 1000 catheter days respectively.

The results suggest that, in our home parenteral nutrition patient group in the west of Scotland, taurolidine lock has proven an effective means of reducing the incidence of catheter-related bloodstream infections.

1. Bisseling TM, Willems MC, Verleijen MW *et al.* (2010) *Clin Nutr* 29, 464–468.