Home clinical assistance: ITALIAN SURVEY OF HCA SUPPORT FOR THE MANAGMENT OF CVC IN PEDIATRIC HEMOPHILIC PATIENTS IN PROPHYLAXIS

Zanon E. [1], Milan M. [1], Pavei P. [2], Mognato G. [3], Galliano F. [4], Mancuso G. [4]

Haemophilia Centre, Department of Cardiologic, Thoracic and Vascular Sciences, University of Padua Italy [1]; Clinical Surgery I University of Padua[2]; Pediatric Surgery University of Padua [3]; Reference Center for the Hemostatic and Thrombotic Diseases of Childhood , University of Palermo [4]

BACKGROUND.

Primary prophylaxis is considered by the World Health Organisation (WHO) to be the optimal therapy for treating severe haemophilia A or B (HA, HB) as it is the only treatment capable of preventing haemophilic arthropathy (1).

Among paediatric haemophilia patients, peripheral venous access is unable to support proper prophylaxis in the long term. Thus, there is the need to make use of central venous catheters (CVCs), which may be tunnelled externally (for instance, the Broviac catheter) or completely implantable internally (like the Port A catheter) (2).

The literature reports an infection incidence of 0.66 per 1,000 CVC-years, and some rare cases of thrombosis.(3,4). The adequate training of parents is the key to the prevention of these complications. Parents need to learn how to handle the CVC correctly and how to follow standard procedures methodically (3).

METHODS AND AIM OF THE STUDY.

The parents of nine paediatric patients with HA or HB agreed to participate in the Home Clinical Assistance (HCA) Service proposed by Baxter after the implantation of a CVC carried out at the Paediatric Surgery Unit of the University of Padua .

The HCA is a nursing service available to haemophilia centres which aims to train parents of haemophiliac children on prophylaxis or IT regimens in the home-based management of the CVC.
Nurses offer home clinical assistance to instruct parents according to a standardised protocol on the use and maintenance of CVCs; home visits are provided until the latter are able to manage CVC and infusion therapy autonomously.
The subsequent follow-up provides monthly telephone contact as well as intervention in case any problems related to the use of the implant should arise.

The aim of the study was to assess whether such a service would reduce the risk of complications when utilising CVCs.

RESULTS.

Nine CVCs (5 Broviac and 4 Port A catheters) were implanted in 8 paediatric patients with HA and 1 with HB so as to initiate regimes of prophylaxis in 8 cases and of immunotolerance in 1 case.

Treatment with rFVIII (ADVATE, Baxter) was started in 8 patients, and with rFIX (Benefix) in the only patient suffering from HB.

On CVC implantation, the mean age was of 18.8 months.

Therapy consisting of three infusions a week in HA prophylaxis, two infusions a week for HB and daily infusion for IT regimen was scheduled.

In order to train parents up to full independence, an average of 10.44 days/infusion was required. The mean observation period was 969.9 (98-2400) days (see Table 1).

None of the children presented with infectious complications, nor were there any cases of thrombotic occlusion of the CVC. In two patients the externally tunnelled catheter was removed due to mechanical failure (internal breaking or leakage from the cuff).

Table 1. Results of the study on the use of CVCs in nine haemophilic children

Population Characteristics	
Haemophilia A	8
B	1
Age at CVC implant mean (min-max)	18.8 (3-65)
CVC type	
percutaneous	5
Port-A-cath catheter	4
Number of days' training for CVC mean(min-max)	10.44 (5-20)
Reason for implant	
ITI	1
prophylaxis	8
Occlusions	0
Infectious complications	0
Period of observation in days mean (min-max)	969,9 (98-2,400)

CONCLUSION.

Even though our case study is based on a small number of patients, proper nurse-guided training using standard protocols may well be the key to optimal management of prophylaxis in haemophiliac children in the home setting, with minimum discomfort and an improved quality of life for both the children and their parents.

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