Totally implantable venous access devices (TIVAD), a survey at the Gothenburg CF-centre

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Objective: TIVAD has been used for many years at our CF centre for administration intravenously at home of antibiotics and nutritional solutions. The CF-team give individual information to the patient in need of a TIVAD, which is inserted in local or general anaesthesia. The device is inspected regularly and flushed with normal saline and heparin every one to three months. We avoid to use it for blood samples. We assessed the outcome of TIVADs; reasons for insertion, removal, lasting time and complications.

Methods: Demographic and clinical data were extracted from the patient database and patient charts. There were 175 patients [53 (30%) <18 years] with a median age of 23 years (range 0–63) attending the Gothenburg CF-centre during 2013. Lung-transplanted patients (11/175) were excluded from analysis.

Results: In total 49 patients (30% of the patient population) – 37 (33%) of the adults and 12 (23%) of the children – had or had previously had a TIVAD and 32 (65%) were females. The total number of TIVADs was 80 (1–5/patient) with a median time lasting of 4.8 (0.1–23.9) years by 31.12.2013. The first TIVAD was inserted at median of 12.5 years of age (range 0.5–38.6) and the major indication was repeated intravenous antibiotic treatments.

Reasons for removal/change were infection, occlusion, venous thrombosis, catheter fracture, local trauma or local reaction, patient’s wish or no more need of the device. Three patients with thrombotic complications have new devices and anticoagulant therapy.

Conclusion: TIVAD is a good and safe alternative for patients in need of frequent infusions. Complications occur and have to be checked for regularly by the CF nurse.

In-house provision of a PICC/Midline service by the CF nursing team

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Bristol Adult CF Centre (BACFC) is a CF specialist centre caring for ~200 patients in South West UK, delivering over 5000 days of intravenous antibiotic therapy per year. For patients without totally implanted venous access devices, midlines or peripherally inserted central venous catheters (PICCs) inserted under ultrasound guidance offer greater comfort, reduced risk of infection, enhanced vein preservation, easier patient to management and drug administration, and far greater longevity than standard intravenous cannulas. However, midline/PICC insertion under ultrasound guidance requires specific training.

The use of PICC/midlines has almost doubled in the last 2 years (Table 1) with increasing number of IV days and high levels of patient satisfaction with the hospital nurse-delivered service. Increased demand has increased pressure on the hospital service, reducing flexibility of start time and leading to delays inserting lines and starting antibiotics.

Table 1

<table>
<thead>
<tr>
<th>Month</th>
<th>Midlines inserted</th>
<th>PICCs inserted</th>
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<tbody>
<tr>
<td>September 2011 – August 2012</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>September 2012 – August 2013</td>
<td>83</td>
<td>5</td>
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To address this increase in demand a CF specialist nurse was trained to insert midlines and PICCs under ultrasound guidance. Training comprised one mandatory study day followed by 1 day a week for 6 months working alongside the hospital PICC service nurses. The CF centre purchased an ultrasound machine at a cost of GBP19000. Placement of 1 line per week is required to maintain skills.

Initial experience has been that the introduction of this in house service has increased flexibility and reduced waiting time for line insertion and initiation of treatment.

Home visits of CF coordinating nurses – experience of Necker hospital

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Objectives: 250 patients are followed in the Necker Pediatric centre by 2 coordinating nurses.

Methods: In order to personalize CF care, the CF nurses make home visits.

Results: We reviewed 71 home visits last the 2 years. 7 (4/3) were done to explain CF care to parents of newly diagnosed children. These visits focused on hygiene procedures implementation, nutrition advice and beginning of therapeutic education. 11 (5/6) visits were done for implementation of antibiotic nebulization, the aim was to show the techniques and the cleaning of the nebulizer. 20 (7/13) visits were performed for IV infusion. Sometimes the parents were trained for IV infusion; they had followed training courses at hospital before the coordinating nurse visited the parents for the first infusion. Home visits were more often dedicated for home nurse training. 1 visit was performed last year for enteral nutrition implementation in order to evaluate the techniques at home. In this case it was the child who practised. The other visits were done at school in order to facilitate school integration and a few ones in other medical sites to exchange with the team.

Conclusion: Such visits enable the CF nursing staff to better understand the daily reality of the family and adapt the CF care.

Awareness of infection control within cystic fibrosis health care – a Scandinavian study

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Objectives: Infection control is a cornerstone in cystic fibrosis (CF) care. Reducing the risk of cross infection among hospitalised CF patients requires health care professionals to sustain the awareness of CF guidelines. The aim of this study was to illuminate awareness of hygiene regimens and infection control guidelines for CF care at Scandinavian Cystic Fibrosis Centres (SCFCs) and Norwegian Cystic Fibrosis Satellite Teams (NCFSTs).

Methods: We modified the knowledge, attitudes and practices (KAP) survey used earlier for CF and Infection Control care teams in the United States regarding sputum cultures, hand hygiene, education and infection control measures in hospital or at home. Team professionals representing different disciplines at 6 SCFCs and core team professionals at 10 NCFSTs received individual questionnaires.

Results: The response rate was 61/166 (37%) and 30/52 (58%) at the SCFCs and NCFSTs respectively. SCFC respondents demonstrated higher KAP (range 49–100%) than NCFST (range 23–100%). Both groups had a high awareness of outcome expectancy for selected guideline components (80–100%), but moderate familiarity awareness. Items connected closely to practical care and medical treatment had a KAP of 73% and 80% versus 93% and 74% respectively. There was a low awareness 49% versus 23% of guideline contents for both groups, whereas awareness above 75% for guideline components is commonly considered sufficient.

Conclusion: This study revealed in general good KAP of CF infection control measures in SCFC and NCFST, but there is nevertheless room for improvement of CF guidelines components.