406 Domiciliary assistance in cystic fibrosis: the experience of a regional center

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The domiciliary assistance (DA) is an important tool that reduces the number of hospitalization and the length of hospital stay improving the quality of life. The reduction in sanitary costs and in multi-drug-resistance microorganisms infections can also be obtained.
Methods: In order to evaluate the feasibility of DA in patients with cystic fibrosis (CF), we performed a project that provides assistence to: 1. family with newborn diagnosis of CF (January 2006-November 2009), normally requiring about 7.5 days of hospital stay, and 2. CF patients with bronchopulmonary exacerbation (BPE) needing iv antibiotic administration (from March to December 2009).
Results: During our experience, 29 families with newborn diagnosis of CF received three mounts cycles of DA including monthly doctor and a social assistant visit and twice a week physiotherapist visits. Furthermore, 15 CF adult patients (10–52 yr) with BPE underwent 17 DA cycles including home iv antibiotics administration (15±5 days), 3 doctor visits, 4 nurse and physiotherapist visits and 2 social assistant visits; only 3 patients started the antibiotic administration during a short hospital admission (8 days). No adverse events, complications or needs of hospital admission occurred during the period of DA. The project permitted to avoid 217 days of hospitalization for newborns and 248 for patients with BPE.
Conclusion: A multidisciplinary DA provides a comprehensive help to CF patients and can safety manage different needs (e.g. physiotherapy, antibiotics administration, social support) in different settings (e.g. new diagnosis, BPE) reducing the hospital stay and improving the quality of life.

407 Totally implantable vascular access devices – review of complications at a UK centre

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Totally implantable venous access devices (TIVADs) have revolutionised treatment for patients with poor peripheral venous access or who require repeated courses of IV therapy, but studies show a 42–54% complication rate. To look at this further, we reviewed all 24 TIVAD complications (10 venous thrombosis, 6 infection, 3 port occlusion, 3 line split, 1 pneumothorax and 1 cellulitis) in 16 patients (9 female) over an 18 month period at our large centre (250 adult CF patients), where 73 (29%) currently use a TIVAD. The average age of the device when intervention was needed was 42 months (range >1–120).
As regards infection, positive blood or port tip cultures were not related to sputum microbiology and 5 (80%) infections developed within 2 months of the last IV therapy.
As regards thrombosis, 9 (90%) developed within 1 year of insertion, 3 cases recurring despite formal anti-coagulation and radiological imaging to determine the most suitable insertion site. The site of thrombus was not always at the site of the device, with a higher incidence of thrombus formation in femoral devices (5, 40%).
As regards occlusion, although urokinase was always deployed, all had to be removed eventually.
As regards mechanical problems, split lines (including 1 complete fracture) all occurred during antibiotic therapy.
In conclusion, we have found complications in 22% of our TIVADS over an 18 month period: no common precipitating factor was noted, but the femoral route was more troublesome. The study reiterates the need to take care of these useful devices, especially the need for sterile precautions during times of access and regular anticoagulant flushes during times of disuse.

408 Components of risk associated with home intravenous antibiotic therapy (H-IVAT) in the UK

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Standards for intravenous antibiotic therapy (IVAT) in hospitals are robust, yet there is no consensus on best practice when IVAT is administered by lay caregivers at home. We are conducting a multi-centre study to assess the impact and safety of Home-IVAT for children with cystic fibrosis. This required the development of a tool to survey the range of risk.
Methods: The risk tool was constructed with professionals and caregivers then piloted for its content, face validity, and acceptability using focus groups at different sites. It is hypothesised to predict outcomes for Home-IVAT: (i) caregiver mood, (ii) adverse drug events, and (iii) adherence.
Findings: Data from 45 cases (25 males, 20 females) aged 2–14 years with FEV_1% predicted of 28–113% [Mean(SD), 73.3(18.7)] at 16 sites are reported. The majority (87%) of caregivers delivered 2 antibiotics; in 82% one was an aminoglycoside; 31% conducted this procedure every 3 months; and, 38% of children had a peripheral cannula or long line. Aminoglycosides were mostly given once per day (60%), came ready prepared (69%) and delivered with an infusion device (61%). Other antibiotics were administered by bolus or syringe driver (76%), and given three times per day (77%). Some lay caregivers (9–11%) reconstituted these medications and 50% of the centres chose not to equip families with an anaphylaxis kit. After controlling for FEV_1% predicted, not having an implantable venous access device was associated with caregiver depression [regression coefficient (B) = 4.18 (0.7, 7.66), p = 0.025].
Conclusions: These findings will help CF teams to identify factors that impact negatively on families undertaking this complex health care task at home.

409 Nursing practice with intravenous antibiotic home treatment for patients with cystic fibrosis – a Scandinavian Nurses Specialist Group – CF study

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Background: In Scandinavia there are seven CF-centres: Two in Denmark, four in Sweden and one in Norway. Sweden and Norway have shared care between CF-centres and local hospitals. Denmark has centralised CF-centre care. During the last twenty years there has been an accepted practice for iv antibiotic home treatment for patients with CF in Denmark, Norway and Sweden.
Aim: To make a survey of nursing practice with iv antibiotic home treatment for patients with CF with focus on planning, information and education, cooperation and responsibility.
Method: The questionnaire was translated to each national language, and sent to nurses working with CF at cooperating local/regional hospitals in Scandinavia. Numbers of questionnaires: Denmark 17 out – 16 in, Sweden 71 out – 56 in, Norway 39 out – 18 in.
Results: The study indicates several similarities in nursing practice, but also some differences. Similarities: All patients are instructed – mostly by nurses, first dose at hospital, serum concentation, individual asessment of fitness for home treatment. Few had written instructions or reeducation. Differencies: Anafylactic readiness, person responsible for mixing the antibiotic, treatment duration, adult attendence during infusion, examination at treatment ending, esessment of need for sick leave.
Conclusion: A quality standard for best practice and education for home treatment with intravenous antibiotic for patients with CF is needed. Regular evaluation of practice to secure the best practice. Shared care is also a challenge concerning home teatment with intravenous antibiotic.