

“No touch” catheterisation in a hospital setting

Astra Tech-sponsored EAUN satellite symposium, Thursday, 27 March

Chair: Truls Erik Bjerklund Johansen, DK

“No touch catheterisation in a hospital setting” was among the main topics discussed in a symposium sponsored by Astra Tech on March 27 during the 9th International EAUN Meeting in Milan. The well-attended symposium was chaired by Professor Truls Erik Bjerklund Johansen, the current chairman of the European Society for Infections in Urology (ESIU) and professor at the Urology Department in Århus University Hospital, Denmark.

The speakers panel included Tom Ladds, a registered nurse, who works as a urology specialist nurse at the Manchester Royal Infirmary, the UK, and current president of the Council of the British Association of Urological Nurses (BAUN), and registered nurse Simona Caselli. Caselli works for the acute department at the Spinal Cord Unit of the Montecatone Rehabilitation Institute in Italy and is in charge of monitoring urinary tract infections in trials.

Prof. Bjerklund Johansen presented a ESIU study, started in 2003, on the prevalence of urinary tract infections in urology departments. The Global Prevalence study on Infections in Urology (GPIU-study) aims to explore the prevalence, aetiology and treatment of Nosocomially Acquired UTI (NAUTI) in urology departments from an international perspective. About 20,000 patients have been screened and a database with information on about 1,200 patients with hospital-acquired infections has been built up. The studies are one-day prevalence studies reported through Internet.

The prevalence of NAUTI was 10% in the first study (2003), 14% in the second study (2004) and 11% in the combined analysis. The largest group was asymptomatic bacteriuria with 29% followed by cystitis 26%, pyelonephritis 21% and urosepsis 12%. There were significant differences between regions and types of hospitals.

Causative pathogens were: E. coli 31%, Pseudomonas 13%, Enterococcus 10%, Klebsiella 10%, Enterobacter 6% and Proteus 6%. The resistance to the most commonly used antimicrobials varied from 16% to 75%. The resistance of E. coli, Klebsiella and Proteus was below 45% for the most commonly used antibiotics. Enterococcus sp. and Pseudomonas sp. had resistance rates to most antibiotics above 70%. For E. coli the lowest resistance was 6% to cefuroxime in Germany and the highest resistance was 88% to co-trimoxazol in Asia.

Up to 56% of hospitalised urological patients were receiving antimicrobial therapy on study day: 46% for prophylaxis, 26% for microbiologically proven UTI, 21% for clinically suspected UTI, and 7% for other infections.

Antimicrobials

About 94% of patients with NAUTI got antimicrobials for the current episode. The most commonly used antibiotics were fluoroquinolones (35%), cephalosporins (27%), penicillins (16%), aminoglycosides (15%), and co-trimoxazole (9%). Differences between countries and regions were highly significant.

Data from 4,706 patients were presented in the first report. There were 3,466 males (74%) and 1,240 females (26%). 3% of patients were 16 years or younger, 40% was 16-60 and 56% was older than 60 years.

A total of 3,551 surgical procedures were reported up to and including study day in the 4,706 patients (0.75 procedures per patient). The types of procedures were 42% open surgery, 50% endoscopic surgery, 3% laparoscopic surgery and 5% prostate biopsies, respectively.



Prof. Bjerklund lecturing in a full meeting room

In the study material a total usage of 2,849 catheters were registered (0.61 catheter per patient). Each patient could have more than one urinary catheter or stent. Out of the 2,849 catheters registered, 51% were transurethral catheters with continuous drainage, 10% transurethral catheters with open drainage, 2% clean intermittent catheterisation, 11% suprapubic catheters, 12% nephrostomy tubes and 14% ureteral stents. Use of indwelling catheters was associated with the highest risk for development of NAUTI.

Significant differences in the use of antibiotics and the resistance of pathogens between countries and regions have been observed. There is an urgent need for continuous surveillance of NAUTI and improvement of antibiotic and catheter policy to counteract the widespread increase of antimicrobial resistance. Updated EAU guidelines on catheter-associated UTI was published recently. NAUTI is a serious problem for urological patients and results to huge extra costs for hospitals.

Tom Ladds lectured on “Aseptic Non touch technique catheterisation (ANTT), What is it and why?” He explained the difference between clean, sterile and no-touch technique. Clean technique is usually used in a home setting, and requires normal genital wash and clean hands. The sterile technique is mainly used in hospitals, and requires the disinfection of the

genital area, use of sterile gloves and other sterile material. No touch technique means that no vital part of the catheter is touched (by hands or genitals) during the catheterisation.

Intermittent Self Catheterisation

Ladds also spoke on the complications of Intermittent Self Catheterisation (ISC), describing bacteria and infections as “Public Enemy Nr. 1”. ISC related infections are urinary tract infections (UTI), urethritis and prostatitis. He mentioned the documentation on ISC infections, noting that most of the published papers on the subject were more than 10 years old.

Ladds posed the query: could aseptic non touch technique catheterisation be a solution to the infection problem? Ladd said that in UK hospitals the technique is widely used. He stressed that aseptic non touch technique catheterisation requires good hand hygiene, correct equipment and good insertion technique. With ANTT it is possible to avoid contact with contaminated areas that would otherwise increase infection risk (catheter, genital area). Moreover, Ladds said the technique could be tried on “problem patients,” where catheterisation is performed in unfamiliar surroundings by a caregiver.

Simona Caselli described work procedures at the Montecatone Rehabilitation Institute, considered as Italy’s leading Spinal Cord Unit. Every year, around 270 new patients with spinal cord injury are admitted, with 70% suffering from original trauma lesions and 30% with non-trauma lesions. Since urological problems play a crucial role in the rehabilitation of patients with spinal cord injury, the Montecatone Rehabilitation Institute emphasises the neurourological aspect, from both the diagnostic and therapeutic points of view.

Based on ICS guidelines, treatment of neurogenic bladder, in the large majority of cases, uses Intermittent Catheterisation (IC), which is started as early as possible, often already in the Intensive Care Department in order to prevent complications related to the use of indwelling catheter. The technique used is “sterile” IC and when the patient is transferred to the Post-Acute Department (before discharge) the patient or the caregiver is trained to perform “clean” catheterisation at home. The devices used in the hospital are self-lubricating disposable catheters, in 80% represented by Lofric Primo, which allows the patient and the operator a risk-free and easy



Simona Caselli, Tom Ladds and Truls-Erik Bjerklund Johansen



Discussion time

catheterisation in terms of catheter and package handling.

Recently, some tests were done on the use of the “no-touch” technique for intermittent catheterisation, enabling the patient to safely perform catheterisation without touching the catheter’s surface. The technique also results to savings compared with the “sterile” technique. Montecatone Rehabilitation Institute has recently begun using IC with the “no-touch” technique starting with the Acute Department of the SCU, an approach that requires careful evaluation of the results, particularly with regards to the development of UTI. Today Montecatone Rehabilitation Institute has a positive, but limited experience with no-touch technique.

More clinical studies

The lessons learned so far are that the technique requires proper training and that the user needs to have good dexterity. Noted benefits are that the UTI incidence do not overrate the sterile technique and a 277% cost savings compared with the sterile technique. Caselli concluded that:

- Intermittent Catheterisation is the gold standard in the treatment of neurogenic bladder
- No touch technique with Lofric Primo is highly appreciated both in and outside the hospital
- Further studies are needed to prove that the no touch technique offer benefits in terms of UTIs

The symposium ended with a panel discussion and a Question & Answer forum. The need for precise terminology concerning the various catheterisation techniques was discussed, and also if the No touch technique could be recommended in a hospital setting. Due to the lack of scientific evidence, a clear recommendation cannot be made yet. However, it was noted that it could be worth trying NTT in problem patients both in and outside the hospital.

In his concluding message Prof. Bjerklund Johansen said there are several good arguments for the increased use of intermittent catheterisation in hospitals but so far we do not have study based evidence that supports this. Referring to the cost and serious health consequences of NAUTI, he urged the producers of catheters and the audience to engage in relevant clinical studies.