

URINARY TRACT INFECTIONS IN PATIENTS WITH NEUROGENIC BLADDER UNDERGOING CLEAN INTERMITTENT SELF-CATHETERIZATION TRAINING.

Hypothesis / aims of study

Ever since Lapides & col. reported their first experience with clean intermittent self-catheterization (CISC), this method has been used to treat different types of bladder dysfunctions. This technique may be used in children, men and women with neurogenic bladder promote bladder empty and consequently improve the individual's social condition. One of the most frequent complications of clean intermittent self-catheterization is urinary tract infection (UTI) and its prevalence, in the literature, is extremely varied due to the different assessment methods applied (1). Nursing intervention is simple and effective in reducing the risk of UTI in individuals with CISC - identified as risk patients. There was a 65% reduction in the incidence of UTI in patients who were instructed by nurses (2). The aims of the study are determine the incidence of urinary tract infections and the most frequent etiological agent in patients with neurogenic bladder undergoing clean intermittent self-catheterization training at the Outpatient Neurogenic Bladder Unit.

Study design, materials and methods

Prospective study was done in children and adults of both sexes. A protocol was elaborated to assess social and demographic data, bladder dysfunction, duration of urethral catheter, conventional urodynamic study, uroculture during four consultations with an initial interval of one month, then of three months totalizing seven months follow up. In order to teach the patient and the individual responsible for the patient on the CISC process, the technique was systematized according to the fundamental principles of easy comprehension, low costs and the possibility of performing the technique at home, work, leisure, school and when traveling. The patient was always trained by the same professional. The modification of the self-care process in the patient's life was assessed when the patient came to the outpatient unit during the follow-up period. The urine was collected by the patient using the CISC technique at the neurogenic bladder outpatient unit with a polyvinyl chloride urethral catheter (PVC) in a sterile container. The urinary infections were identified based on the notes in the protocol, an active search of cases and the results of microbiological cultures analyzed in the laboratory.

Results

the study sample consisted of 23 patients, whose mean age was 33 years, which ranged from five to 61 years. Their educational level was basic school level 47.8%, the family income between two and four current minimum salaries (69.6%), 34.8% did not work and 21.7% had retired and were pensioners. The most frequent etiological agent at the first consultation was *Escherichia Coli* (50%) and at the fourth consultation it was 37.5%, *Klebsiella Pneumoniae* at the first consultation was 18.8% and 12.5% at the fourth consultation, the same as *Proteus Mirabilis* that only appeared at the last consultation. The incidence of 14 positive urocultures without symptoms was 21.4% at the first consultation and 93% at the last consultation. With regard to the distribution of positive cultures and patients with symptoms we obtained: 14 positive urocultures at the first consultations with 11 of the patients with urinary infection and 15 positive urocultures with one of the patients with symptoms of urinary infection at the fourth consultation. The most common symptoms observed at the first consultation were: sediment in the urine - 36.6%; complaints of dysuria, suprapubic pain and sediment in the urine; 18.1%, complaints of suprapubic pain and sediment in the urine 18.1 %; 9% with dysuria; 9% with dysuria and suprapubic pain and 9% with suprapubic pain. At the fourth consultation, one patient presented symptoms of dysuria and suprapubic pain. The self-catheterization procedure was performed by 78.3%.

Interpretation of results

The most frequent etiological agent in CISC patients was *Escherichia Coli*, which is in accordance with the data in the literature. The distribution of patients with urinary infection symptoms and positive uroculture was observed to have diminished with the maintenance of an adequately performed procedure. A frequency of 93% of patients without urinary infections, even though the urocultures were positive, demonstrated the benefits of CISC in the quality of life of these patients. We believe that a 78.3% result of patients with clean intermittent self-catheterization is due to the interaction between patient and professional during training.

Concluding message

The most frequent etiological agent was *Escherichia Coli* and the incidence of symptomatic urinary infection diminished with the introduction of CISC.

REFERENCES

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2. **.SCI NURS** 1999;2:54-56

FUNDING: NONE

DISCLOSURES: NONE

HUMAN SUBJECTS: This study was approved by the fcm unicamp and followed the Declaration of Helsinki Informed consent was obtained from the patients.