Objective: to investigate the process of urinary elimination in hospitalized clinical patients. Method: descriptive and cross-sectional study conducted in a medium-sized hospital in the interior of the state of São Paulo, Brazil. After a pilot test, data were collected for 15 days through observation and interviews held with 18 years old or older clinical patients hospitalized for five or more days. The study was approved by the Institutional Review Board at the University of São Paulo at Ribeirão Preto, College of Nursing (Process No. 1158/10). Results: all 35 patients interviewed used the toilet at home to urinate; some reported urinary changes before hospitalization. Conclusion: these results reveal that the process of hospitalization, in the studied sample, changed nursing care in urinary elimination, which implies the need to improve nursing care based on ethical and scientific knowledge of the subject. Descriptors: Urinary Tract; Hospitalization; Patient Care; Nursing.

RESUMO
Objetivo: investigar o processo de eliminação urinária nos pacientes clínicos hospitalizados. Método: estudo descritivo, transversal, realizado em um hospital de médio porte do interior do estado de São Paulo. Após estudo piloto, os dados foram coletados por 15 dias com a técnica de entrevista e observação, junto aos pacientes clínicos hospitalizados há cinco ou mais dias, maiores de 18 anos. Esse estudo foi aprovado pelo Comitê de Ética em Pesquisa da Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo, protocolo n° 1158/10. Resultados: dentre os 35 pesquisados, todos utilizavam no domicílio o vaso sanitário para micção; alguns deles referiram alterações urinárias antes da internação. Conclusão: tais resultados evidenciam que o processo de hospitalização modifica a assistência de enfermagem nas eliminações urinárias, o que implica na necessidade do aprimoramento da enfermagem baseado no conhecimento ético e científico do assunto. Descritores: Sistema Urinário; Hospitalização; Assistência Ao Paciente; Enfermagem.

RESUMEN
Objetivo: investigar cómo ocurre el proceso de eliminación urinaria los pacientes clínicos hospitalizados. Método: estudio descriptivo, transversal, se realizó en un hospital de medio porte, el interior del estado de São Paulo, después de aprobado por el Comité de Ética e Investigación de la Escuela de Enfermería de Ribeirão Preto. Después de estudio piloto, los datos fueron recolectados durante 15 días a través de entrevista y observación de los pacientes clínicos hospitalizados por cinco días o más, con más de 18 años, conscientes y de acuerdo con la participación en la investigación. Resultados: de 35 encuestados, todos utilizaban en su casa inodoro para orinar. Algunos informaron alteraciones urinarias antes de la hospitalización. Durante la hospitalización hubo alteraciones los hábitos de higiene y el proceso de eliminación urinaria. Conclusión: los resultados muestran, que el proceso de hospitalización modifica la atención de enfermería las eliminaciones urinarias y lleva la necesidad de mejora de la enfermería basada en el conocimiento ético y científico. Descriptores: Sistema Urinario; Hospitalización; Atención al Paciente; Enfermería.
INTRODUCTION

Hospitalization represents a change in patients’ life habits, distancing them from family and friends. In order to provide quality nursing care during this event, professionals need to consider the socio-cultural, environmental and behavioral characteristics of individuals from their admission to discharge from the hospital.1

Populations have increasingly achieved high levels of aging and as a population ages, seniors are in greater number and spend more time in health facilities. It is common, in this phase of life for chronic and degenerative diseases to emerge, which when combined with the aging individuals’ physiological processes, often require specific and complex interventions on the part of health professionals.1,2

One of the organic functions that often changes and is observed in virtually all hospitalized patients is the process of urinary elimination. Such a change occurs due to the stay in a hospital, the pathological process itself, or can also be due to invasive procedures, such as urinary catheterization. In this context, the most frequent conditions found include urinary tract infection, urinary incontinence, and urinary retention, while the main risk factors involved in the development of these conditions are: long hospitalizations, advanced age, anatomic and physiological dysfunctions of the urinary system, and pathologies associated with chronic-degenerative diseases.3-5

In addition to the conditions patients may present, urinary changes that occur during hospitalization represent even more changes in the nurse’s work process, since these demand time and specific technical knowledge.

Since nurses are constantly with patients in health facilities, they have the incessant responsibility to care for urinary processes, whether helping patients in self-care and preventing harm to the urinary tract, or performing invasive procedures, such as urinary catheterization and the collection of material for laboratory exams. In this context, it is necessary for nurses to help patients to maintain healthy urinary habits, and also to educate patients concerning hygiene and self-care.1,6-8

Even though this subject is part of the routine of nurses’ education and clinical practice, technological development and investment in research associated with nursing care to urinary eliminations is limited.

In this context, to support and improve future nursing actions regarding the process of urinary elimination, this study’s objective was to investigate how the process of urinary elimination has occurred for hospitalized clinical patients.

METHOD

This descriptive and cross-sectional study was conducted in one of the clinical hospitalization wards of a medium-size public hospital, located in the interior of São Paulo, Brazil.

After the pilot study, data were collected from hospitalized clinical patients. Mentally sound clinical patients hospitalized for five or more days, 18 years old or older, who consented to participate in the study by signing free and informed consent forms were included in the study. The researchers collected data within a period of time authorized by the facility (15 days). Two data collection instruments were used: structured interviews and semi-structured observations to identify the aspects related to the patients’ process of urinary elimination. The interview instrument addressed data related to the characterization of the subjects, clinical aspects and characterization of the process of urinary elimination experienced during hospitalization. Observation of the aspects related to the process of urinary elimination was performed during the interview.

Thirty-five (14%) out the 258 (100%) patients hospitalized in the studied period met the inclusion criteria.

The results from the interviews were analyzed based on a literature review utilizing descriptive statistics and Microsoft Excel.

The study was approved by the Institutional Review Board at the University of São Paulo at Ribeirão Preto, College of Nursing (Process No. 1158/2010) in accordance with guidelines provided by Resolution 196/96, CONEP.

RESULTS

Thirty-one (88.6%) out of the 35 patients composing the study sample were hospitalized between five and 10 days, two (5.7%) between 11 and 15 days, and another two (5.7%) were hospitalized between 16 and 19 days. In regard to gender, 17 (48.6%) were male and 18 (51.4%) were female. In terms of age, 13 (37.2%) were aged between 71 and 92 years old, nine (26.0%) were between 61 and 70 years old, seven (20.0%) from 51 and 60 years old, and another two (5.7%) between five and 10 days, two (14%) out the 258 (100%)

English/Portuguese
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789
(31.4%) were homemakers, two (2.9%) were independent workers, two (5.7%) were real state agents, two (2.9%) were unemployed, one (2.9%) was a laboratory technician, one (2.9%) was a bricklayer, one (2.9%) was a caregiver, one (2.9%) was a nursing technician, and one (2.9%) was a driver. Of the interviewees, three (8.6%) were functionally illiterate, 29 (83.0%) had not completed primary/middle school, two (5.7%) had completed high school, and one (2.9%) had a technical education.

When asked about their urinary antecedents, six (17.1%) women reported sporadic episodes of urinary incontinence and five (15.6%) reported urinary tract infections. Among the male patients, three (8.6%) reported urinary tract infections and two (5.7%) reported urinary incontinence. All 35 (100.0%) patients reported that they used the toilet at home to urinate before being hospitalized.

Of the 35 (100.0%) interviewees, 27 (77.1%) were amputal without requiring assistance and eight (23.0%) required assistance. The patients’ primary diagnoses and characteristics of urinary eliminations during the period of hospitalization are presented in Table 1 and Figure 1. All the patients (35/100.0%) used the toilet at home to urinate and their urinary habits changed from the first day of hospitalization.

Table 1. Distribution of interviewed patients according to primary diagnosis and process of urinary elimination. Ribeirão Preto, SP, Brazil 2011.

<table>
<thead>
<tr>
<th>Primary diagnosis</th>
<th>Process of Urinary Elimination</th>
<th>T oilet</th>
<th>Diaper</th>
<th>Collecting flask</th>
<th>ICU* or cystostomy</th>
<th>Bedpan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiopulmonary</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Endocrine-related cutaneous conditions</td>
<td></td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Neurological</td>
<td></td>
<td>1</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Urological</td>
<td></td>
<td>1</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>1</td>
</tr>
<tr>
<td>Oncological</td>
<td></td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

*IUC - Indwelling Urinary Catheter

In regard to habits of hygiene after urinary elimination at home: 20 (57.1%) interviewees reported no procedure was performed; 11 (31.4%) used toilet paper; three (8.6%) reported the use of a hand-held bidet spray followed by toilet tissue, and one (2.9%) reported the use of a bidet spray.

During hospitalization, the following hygiene habits were reported: 15 (42.8%) reported no procedure, 11 (31.4%) reported the use of toilet tissue, one (8.6%) reported the use of a bidet spray followed by toilet paper, and one (2.9%) reported only the use of a bidet spray.

The patients who used diapers (5/14.3%), had a cystostomy (1/2.9%), or an indwelling urinary catheter (2/5.7%), and received hygiene care from the nursing staff; the perineum was cleaned with water and soap during the morning bed bath.

Six (17.1%) out of the 35 (100%) patients observed collected urine in a flask to control urine output. These containers were identified with the patients’ name and were stored in the patient’s bathroom; the urine was discharged at the end of each shift by the nursing team. The bedpan used by five (14.3%) patients remained in the bedside cabinet or on the patient’s step stool. The urine stored in these vessels was discarded with the help of the patient’s companion and/or the nursing staff on duty.
DISCUSSION

The role of nurses in assisting hospitalized clinical patients is related to the specific needs that emerged during the period of hospitalization, of which urinary elimination is one. Nurses have the responsibility to care for and educate patients, with the objective to involve them in the care process and also to lead the nursing staff in actions that assist and encourage patients to perform self-care.

When planning and providing nursing care regarding patient urinary elimination, nurses should be attentive to each patient’s individuality without, however, forgetting the main reason s/he was hospitalized and any associated co-morbidities.1

The characteristics of the studied sample show that most of the observed clinical patients were older than the age of 60, which corroborates studies indicating that this population currently occupies most of the hospital beds in Brazil. The prevalence of chronic-degenerative diseases in this age group is usually aggravated in the initial phases, resulting in longer hospitalizations, as well as a large percentage of hospitalizations and re-hospitalizations that require qualified care provided to the elderly from a new perspective of healthcare, paying special attention to the qualification and number of personnel.8,9

The aspects related to urinary eliminations require reflection upon the fact that advanced age is a factor that predisposes one to muscle weakness, chronic neurological diseases, and changes in sphincter control, which may compromise one’s ability to retain urine, also leading to other conditions in the urinary tract.10 In this context, for nurses to determine one’s ability to adhere to treatment, the progression of the patient’s clinical condition, and the nursing interventions required by urinary elimination for seniors, it is necessary to implement evaluation proposals to verify the patients’ levels of functional independence, having in mind that the aging processes as socially developed do not always accurately reflect the patient’s real condition.10,11

There are factors associated with disease severity, nutritional status, therapy regimen, and unresponsive environment that lead to the functional decline of elderly individuals during hospitalization. About 22.9% of the studied sample had difficulties walking or did not walk at all. The risk of falling increases with age, and can reach values close to 34.0% in individuals 65 to 80 years old, 45.0% among those 80 to 89 years old, and over 50.0% among those above the age of 90 years old.11,12

Urinary elimination among hospitalized clinical patients is influenced by physiological, social and environmental characteristics. For the female gender, behavior concerning urinary elimination is defined as voluntary action of the physiological event of emptying the bladder, composed of specific features such as place, appropriate time to urinate, position and style of urination, and are influenced by physical and social environments, affected by the number of children, types of childbirth, use of anesthesia during labor, the newborn’s weight, menopause, gynecological surgeries, and genitourinary anatomy. Knowledge concerning such factors is important for nurses to understand the factors involved in a woman’s urination, considering her social and cultural habits, ensuring her privacy, time, and appropriate place for urinary elimination, avoiding interruptions of the urine jet and providing preventive methods through education addressing intimate hygiene and the need to empty the bladder to improve muscle tone.4,13

Still in relation to the results obtained, most of the patients reported that they did not use and/or did not receive any hygiene care for the perineum after urinating. Hygiene care has been increasingly neglected or put aside by nurses, exposing patients to the risk of infection. Personal and environmental care and comfort are directly related to nursing care, promoting wellbeing and preventing complications, as an important part of the quality of care delivery. Appropriate aseptic techniques and hygiene care for the perineum are efficient in preventing up to 25% of urinary tract infection events.14

Longer hospitalizations associated with invasive procedures, such as urinary catheterization and cystostomy, can aggravate complications and lead to the emergency of a urinary tract infection. The use of a urinary catheter requires quality care based on knowledge, such as standard precautions, inserting the catheter using aseptic technique, removing the catheter as early as possible, using a closed system to drain urine, and providing intimate hygiene whenever necessary.15,16

The care provided regarding urinary elimination for hospitalized clinical patients is a routine procedure that requires time and should be approached with respect and in a scientific manner. There is little advancement in the field (e.g. disposable diapers to replace cloth diapers) and, unfortunately there are
virtually no records about the positive or negative impact of these actions on patients’ hygienic measures and comfort.

It is apparent, in the studied sample, that the monitoring of urine output in addition to the processes of clinical evaluation of patients often leads to keeping the urine in containers stored open in the patients’ bathrooms. Such actions should be questioned by nurses and addressed with creative, technological actions based on scientific knowledge, that require decision-making and simple measures such as appropriate, clear, precise and reliable records of the urine’s characteristics. 

CONCLUSION

Even though this study was composed of a small sample, which is one of its limitations, we identified that changes in nursing care provided to the urinary elimination of hospitalized clinical patients changes the relationship between patient and professional and requires investment in material and human resources.

Issues related to urinary eliminations are a routine in the daily activities of patients but, for the most part, are not included in care planning and are neglected in the care provided to hospitalized patients. Patients may present changes in urinary elimination during hospitalization. In this context, it is the role of nurses to acquire tools, leading the staff and acting in a more decisive manner through preventive actions and promoting the recovery of patients’ health.

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972
Unurinary elimination of hospitalized clinical...


