Physician Awareness of the Presence of Foley Catheters in Patients Hospitalized in a Community Teaching Hospital

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Abstract

Background: Urinary tract infections are one of the commonest nosocomial infections associated with increased morbidity and mortality as well as increase in health care cost. Catheter-associated Urinary tract Infections (CAUTI) play a pivotal role in nosocomial urinary tract infections. Lack of awareness among the physicians on the presence of Foley catheter in their patients multiplies the risk. The aim of the study was to asses' physicians' awareness of the presence of urinary catheters in their patients.

Methods: This study was conducted in an urban community teaching hospital. We selected patients admitted to the hospital 72 hours prior to investigation and randomly assigned them based on the presence (n=88) or absence (n=175) of Foley catheter. Attending physicians for those patients were then asked about their awareness of the urinary catheter status in these selected groups of patients on the third day. Descriptive statistics were used to analyze the results. Outcomes of the presence of absence of catheters were not measured.

Results: In the study group, 38% of physicians were not aware of the presence of Foley catheter in their patients. Therefore, we can conclude that there is a significant lack of awareness of the presence of urinary catheter in patients among physicians involved in the study.

ABBREVIATIONS

UTI: Urinary Tract Infection; CAUTI: Catheter- Associated Urinary Tract Infection

OBJECTIVES

The objective of the study was to evaluate the awareness among physicians, of a urinary catheter in their patients on the third day of admission.

STUDY POPULATION

The subject population included patients between the age of 18 and 99 who had been admitted 3 days prior to evaluation to the medical or surgical floors of our Hospital. The computer based patient list was used to identify the patients who had been admitted three days prior to each study period.
for the presence or absence of urinary catheter. The information obtained from the patient was entered on a questionnaire sheet with the name of the patient and the attending physician on a detachable column, and a data collection sheet with the patient’s identification code but no name. The presence or absence of the catheter was noted only on the data collection sheet. The physician was then asked about the status of urinary catheter and after a response was recorded, the detachable part containing the patient information was destroyed.

RESULTS

A total of 30 physicians were surveyed for the study of which nine were hospitalist and seventeen were primary care physicians taking care of their own admitted in patients, two were nephrologist and two were surgeons. A total of two hundred and sixty three patients were included in the study, of which eighty eight patients (33%) had an indwelling urinary catheter and they constituted the study group. In the study group there were fifty one male and thirty seven female patients. One hundred and seventy five patients (67%), who did not have a urinary catheter and constituted the control group. In this group there were ninety eight male and seventy seven female patients.

In the study group of eighty eight patients, corresponding physicians were unaware of the presence of urinary catheter in fifty five patients (62%) and thirty three patients in the study group (38%) corresponding patients were aware about the presence of urinary catheter (Table 1, Figure 1).

In the control group of one hundred and seventy five patients without urinary catheter, 74% of the patients the treating physicians gave the appropriate response. 23% of patients the physician was unsure about the presence or absence of urinary catheter. 3% of patients the treating physicians give incorrect response, while the patient actually did not have a urinary catheter (Table 1, Figure 1).

Of all the thirty physicians who participated in the study two major groups were hospitalist and primary care physicians. The hospitalists were taking care of more patients per day (average 6.55) compared to primary care physicians (average 1.47). But we were not able to find any difference in the level of awareness of the presence or absence of Foley catheter among hospitalist or primary care physicians (Table 2).

DISCUSSION

Catheter associated urinary tract infection is one of the most common health care associated infection accounting for more than 40% of all nosocomial infections [1, 2]. 20% of the admitted patients in hospital have urinary catheterizes [3]. Studies have shown that 20%–30% of patients with a urinary catheter do not have a valid indication for catheterization. Risk of urinary tract infection increases with the duration of catheterization with a 5% increase in the incidence of bacteriuria each day which in majority of cases are asymptomatic and do not require any treatment [4]. 3% of these develop bacteremia which can lead to longer hospital stay, sepsis and even death. Each episode of urinary tract infection costs about $600, whereas each episode of urinary tract infection with bacteremia can cost up to $2800 [3, 5]. Since October 1, 2008, center for Medicaid and Medicare considers catheter associated urinary tract infection as preventable complications for which hospital no longer receive payment for any additional cost of treatment. Zhan C et al. have suggested that denying additional payment by Medicare for hospital acquired conditions could cost the hospitals $800 million in Medicare payments [6]. It has also been shown that one reason why catheters are needlessly left in place is the lack of physician awareness of the presence

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<th>Table 1: Study Group Response.</th>
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<td>Physician Response</td>
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![Figure 1](image1.png) Physicians response to questionnaires about their awareness in patients with Foley catheter.

![Figure 2](image2.png) Physicians response to questionnaires about their awareness in patients without Foley catheter.
of urinary catheter in their patients. A similar study done in a university teaching hospital to evaluate the awareness showed that up to 28% of physicians were unaware of the presence of urinary catheter in their patients.

Our study further corroborates this finding in a community teaching hospital. In our study, the lack of awareness among physicians about the presence of urinary catheter was 38%, which was higher than the previous study. Another interesting finding was that in 23% of patients without urinary catheter, the physician was unsure about their status. One of the common arguments put forth by physicians is that increasing workload makes them miss those aspects of the patient care that are not acutely relevant towards the patients’ illness. However, our study shows that this may not necessarily be true as we were not able to show any difference in the awareness rate among hospitalists, who were on an average taking care of 4.5 times more number of patients than primary physicians.

The situation warrants hospital system-wide interventions to improve the physician’s awareness of urinary catheter presence in their patients and to discontinue unnecessary catheterization. Various simple methods which can be implemented to avoid this avoidable complications includes education of health care personals about catheter associated infections, alerts in-built within the system to remind the physicians and nurses of the duration of urinary catheterization with recommendation for removal, nurse initiated protocols for removal of urinary catheter when not needed, restricting the initial placement of urinary catheter for appropriate indication only and whenever possible use alternative techniques like condom catheterization or intermittent catheterization along with bladder scans. Dumigan et al using a multidisciplinary team approach were able to reduce the incidence of catheter related infection by 17-45% [7]. Inspite of all these evidences, Saint et al. noticed that only 9% of 600 national hospitals were using some catheter removal remainders or stop orders [7,8]. Our study further emphasizes the fact that significant numbers of physicians were unaware about the presence or absence of urinary catheters in their patients. So it is prudent place interventions within the system to remind health care personals about the presence of urinary catheter.

CONCLUSION

This study shows that the physicians show significant lack of awareness of the presence of urinary catheter in their patients. This exposes the patients to hospital acquired UTI and other complications. Multidisciplinary team approaches can significantly reduce the rates of these complications, improve patient safety, and reduce health care costs.

REFERENCES