



**TO ASSESS EFFECTIVENESS OF NURSING INTERVENTIONS ON PREVENTION OF URINARY TRACT INFECTION AMONG PATIENTS WITH URINARY CATHETERS ADMITTED AT PRAVARA RURAL HOSPITAL, LONI**

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**ABSTRACT**

A Urinary tract infection (UTI) is a bacterial infection that affects any part of the urinary tract. The main etiologic agent is Escherichia coli. **Objectives:** To assess the effectiveness of nursing intervention on prevention of UTI. To correlate the findings with selected clinical characteristics. **Methods and Materials:** A descriptive study with cross sectional approach was used. The study was a one group post-test research design. The sample consisted of 30 patients including urinary tract infection with urinary catheters. **Results:** The study revealed that most (87%) of the urinary tract infection was male and remaining (13%) were female. More than half (63%) of them medical and surgical illness. Majority (85%) had cystitis as a type of urinary tract infection due to road traffic accident, in relation to all the manifestation higher (100%) of them had acidic nature, clinical sign and bacteria. It was evident from the result that most of them 10-40% had good recovery. **Discussion:** This study created the complete spectrum of urinary tract infection. The finding of the study have shown that urinary tract infection were common among older adult with male predominance. Majority had acidic nature of urine; higher percent of them had burning micturition, fever, pain; significant had edema and tenderness. Higher percentage had bacteria, lymphocytes in urine and significant pus cells, RBCs and WBCs. It was evident from the results that most of the urinary tract infection patients had good recovery.

**KEYWORDS :** Effectiveness of nursing interventions; Urinary Tract Infection

**Introduction**

The urinary system consists of the kidneys, ureters, bladder, and urethra. The key elements in the system are the kidneys, a pair of purplish-brown organs located below the ribs toward the middle of the back. The kidneys remove excess liquid and wastes from the blood in the form of urine, keep a stable balance of salts and other substances in the blood, and produce a hormone that aids the formation of red blood cells. Narrow tubes called ureters carry urine from the kidneys to the bladder, a sac-like organ in the lower abdomen. Urine is stored in the bladder and emptied through the urethra.<sup>1</sup>

The average adult passes about a quart and a half of urine each day. The amount of urine varies, depending on the fluids and foods a person consumes. The volume formed at night is about half that formed in the daytime.<sup>2</sup>

A urinary tract infection (UTI) is a bacterial infection that affects any part of the urinary tract. The main causative agent is Escherichia coli. Although urine contains a variety of fluids, salts, and waste products, it usually does not have bacteria in it.<sup>2</sup> when bacteria get into the bladder or kidney and multiply in the urine, they cause a UTI. The most common type of UTI is a bladder infection which is also often called cystitis. Another kind of UTI is a kidney infection, known as pyelonephritis, and is much more serious. Although they cause discomfort, urinary tract infections can usually be quickly and easily treated with a short course of antibiotics.<sup>3</sup>

**Problem Statement**

To assess effectiveness of nursing interventions on prevention of urinary tract infection among patients with urinary catheters admitted at Pravara Rural Hospital, Loni

**Objectives**

- a) To assess the effectiveness of nursing intervention on prevention of UTI.
- b) To correlate the findings with selected clinical characteristics.

**Methodology**

- **Research approach:** Descriptive design with cross sectional approach.
- **Setting of the study:** The study was conducted in the medicine surgery obgy, ortho wards of pravara rural hospital loni.

- **Research design:** Experimental study post test only design.
- **Sample:** The sample consisted of patients including urinary tract infection with urinary catheters.
- **Sampling Technique:** Purposive sampling technique.
- **Sample Size:** 30
- **Tool:** The tool was prepared in the form of structured proforma including demographic variables.

**Sampling criteria**

**Inclusion criteria**

- Patients with UTI,
- Who are willing to participate in study
- Who are able to understand and speak Marathi Language

**Exclusion criteria**

- Patients with UTI,
- Who are acutely ill
- Who are Underwent Transurethral resections of prostate

**Results**

The present study has been taken up to assess effectiveness of nursing interventions on prevention of urinary tract infection among patients with urinary catheters admitted at Pravara Rural Hospital, Loni Analysis and interpretation is based on the objectives of the study. The tool was prepared in the form of structured proforma including demographic variables. The analysis was done with the help of inferential and descriptive statistics.

**Percentage wise description of nursing interventions on prevention of Urinary Tract Infection.**

SN	Aspects	Day 1 %		Day 3 %	
		f	%	f	%
I.	Perineal Care	4	13	4	13
II.	Catheter Care	30	100	30	100
III.	<b>Fluid Management Intake</b>				
1	Water	23	77	24	80
2	Milk	7	23	6	20
3	Juice	2	7	2	7
IV.	<b>Output</b>				
1	Urine	30	100	30	100
V.	<b>IV Fluids</b>				

1	Normal Saline	30	100	30	100
2	DNS	22	73	22	73
3	RL	29	97	24	80
VI.	<b>Drugs</b>				
1	Antibiotics	30	100	30	100
2	Antidiuretics	30	100	30	100
3	Mycines	27	90	24	80
4	Antiinflammatory	26	87	26	87
1	Antimicrobial	17	53	18	60

The above mentioned table depicts that on day 1 majority 30(100%) of the patients was given the catheter care followed by 23(77%) had fluid intake water significant 7(23%) had milk, Majority of 30(100%) was treated with Normal saline, 22(73%) were on DNS, followed by 29(97%) on RL. Majority 30(100%) were treated on antibiotics, antidiuretics followed by 27(90%) and 26(87%) were on Mycines and anti-inflammatory. However on day 3 majority 30(100%) of the patients was given the catheter care followed by 24(80%) had fluid intake water significant 6(20%) had milk, Majority of 30(100%) was treated with Normal saline, 22(73%) were on DNS, followed by 24(80%) on RL. Majority 30(100%) were treated on antibiotics, antidiuretics followed by 27(90%) and 24(80%) were on Mycines and anti-inflammatory. It interprets that majority of patients was given with catheter care and received the drug therapy.

**Description of effectiveness of nursing interventions on Urinary tract infection patients according to their Clinical signs.**

**N=30**

SN	Clinical Signs	Day 1 %		Day 3 %		Effectiveness
		f	%	f	%	
1.	Burning Micturition	28	93	21	70	23
2.	Pain	25	83	21	70	13
3.	Fever	24	80	10	33	47
4.	Tenderness	4	13	3	10	3
5.	Edema	1	3	1	3	0

The above mention table depicted that majority no of patients had 28(93%) had pain on day 1 whereas 21(70%) pain was present on day 3. The pain was 25(83%) present on day 1, 21(70%) on the day 3. Fever was 24(80%) present on day 1 and 10(33%) on day 3, tenderness was 4(13%) present on day 1 and 3(10%) on day 3. It interprets that majority of urinary tract infection patients presented with the above clinical signs. The effectiveness of nursing intervention was 10 - 40%. The study revealed that most (87%) of the urinary tract infection was male and remaining (13%) were female. More than half (63%) of them medical and surgical illness. Majority(85%) had cystitis as a type of urinary tract infection due to road traffic accident, in relation to all the manifestation higher (100%) of them had acidic nature, clinical sign and bacteria. It was evident from the result that most of them 10-40% had good recovery.

**Discussion**

As we have seen in Pravara Rural Hospital the second leading cause of death is Urinary tract infection, these are infections are more common in the women than men so as I have seen there are many patients with the urinary catheters which are either admitted in hospital or going for the surgery so I feel that nursing interventions need to be planned on prevention of such catheter acquainted infection so I feel that there should be study conducted on the prevention of the urinary tract infection in the Pravara Rural Hospital, Loni.

A study on effectiveness of clinical practice guidelines on prevention of catheter-associated urinary tract infections in selected hospitals found that data were collected from 70 participants (experimental – 35 and control – 35). The results of the study showed that the implementation of clinical practice guidelines in indwelling catheter insertion and maintenance was effective as the p value was 0.001. The urine culture and analysis

reported that, there were three cases which showed the growth of micro organisms in the experimental group, where as in control group two at the time of pre test. After implementing the clinical practice guidelines on CAUTI, the growth of organisms was not reported.<sup>4</sup>

**7. Conclusion**

This study creates the complete spectrum of urinary tract infection patients. The findings of the study have shown that urinary tract infection were common among older adult with male predominance. Majority had acidic nature of urine; higher percent of them had burning micturition, fever, pain; significant had edema and tenderness. Higher percent had bacteria lymphocytes in urine and significant pus cells RBCs and WBCs. It was evident from the results that most of the urinary tract infection patients had good recovery as patients under study were managed with collaborative management (medical, surgical and nursing etc)

**Recommendations**

Recommendations for further study based on the findings of the study the following recommendations could be made-

- The similar study can be conducted with the larger population or at different tertiary care hospital to validate and generalize the findings
- A similar study can be replicated with purview of developing clinical care pathway for the treatment of urinary tract infection patients
- A comparative study can be done in urban and rural settings to see if there are any changes in the epidemiology and demographics of urinary tract infection patients
- A longitudinal study can be conducted to identify long term complications of urinary tract infection
- An qualitative research can be done to assess the burden, quality of life caregivers of urinary tract infection patients
- A study can be done to assess the awareness of care of the urinary tract infection patients of health care professionals

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