

The 3<sup>rd</sup> Global Health and Innovation Conference

## Characteristics of Adult Hospitalized Patients With Urinary Tract Infections In Jakarta Islamic Hospital Cempaka Putih

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## BACKGROUND

Urinary Tract Infection (UTI) is the second common infectious disease after respiratory tract infections.(1,2) In Indonesia, there are 90-100 cases of UTI per 100,000 population per year, or around 180,000 new cases per year.(2) At the Jakarta Islamic Hospital Cempaka Putih the incidence of UTI for the last three years is quite high.

This study was conducted to find out the characteristics of hospitalized patients with UTI at the inpatient installation of Jakarta Islamic Hospital Cempaka Putih for the period January - October 2018.

## METHODS AND MATERIALS

Data were collected from medical records of 77 UTI in adults patients hospitalized at Jakarta Islamic Hospital Cempaka Putih in periode from January – October 2018. Data consisted of patient's identity, Length of stay, result of blood and urine tests, and comorbid diagnosis.

## RESULTS

Out of 77 hospitalized patients with UTI, 61% were women and 39% were men. Patients with an age range of 18-25, 26-35, 36-45, 46-55, 56-65 and >65 years were 13%; 16.9%; 18.2%; 14.3%; 18.2%; and 19.5% respectively. Patients with length of stay ≤ mean (4 days) were 76.6%, and > mean were 23.4%. Patients with blood leukocyte values increased by 58.4%; whereas patients with blood hemoglobin values decreased by 33.8%. Patients with positive leukocyturia and positive hematuria were 64.9% and 54.5% respectively. Patients with positive bacteriuria on urinalysis were 22.1%. As many as 36.4% of UTI patients without comorbidities and 63.6% with other comorbidities.

## DISCUSSION

In this study, the age group that suffered most from UTI was >65 years old. At an elderly age, a person will experience a decrease in the immune system, which will facilitate the occurrence of UTIs.(3) Most patients have elevated blood leukocytes and pyuria. High leukocyte levels are commonly found in urinary system infections, especially in urinary tract infections. The increase in the value of leukocytes in the urine is because leukocytes are one of the cells in the body that function as the first cells to fight microorganisms before other immune cells in the body. The presence of leukocytes in the urine sample can prove the presence of UTI because the presence of leukocytes indicates that an inflammatory response has occurred.(4) In this study, most of the patients had hematuria. Blood that comes out through the urinary tract can cause anemia, especially if the amount of blood that comes out is very large (gross hematuria), for example in hemorrhagic cystitis. Some patients have co-morbidities including diabetes mellitus and urinary tract stones. Urinary tract stones can cause UTI because stones that are considered foreign bodies cause blockages in the urinary tract so that they can become hiding places for bacteria.(5)

Table 1. Characteristic of Respondents

No	Age	Frequency	%
1	18-25	10	13%
2	26-35	13	16,90%
3	36-45	14	18,20%
4	46-55	11	14,30%
5	56-65	14	18,20%
6	>65	15	19,50%
	TOTAL	77	100%
No	Length of Stay	Frequency	%
1	≤ mean	59	76,60%
2	> mean	18	23,40%
	TOTAL	77	100%
No	Hemoglobin Value	Frequency	%
1	Increased	2	2,60%
2	Normal	40	51,90%
3	Decreased	26	33,80%
4	No data	9	11,70%
	TOTAL	77	100%
No	Leukocyte Value	Frequency	%
1	Increased	45	58,40%
2	Normal	29	37,70%
3	Decreased	0	0%
4	No data	3	3,90%
	TOTAL	77	100%
No	Hematuria	Frequency	%
1	Positif	42	54,50%
2	Negatif	18	23,40%
3	No Data	17	22,10%
	TOTAL	77	100%
No	Bacteriuria	Frequency	%
1	Positif	17	22,10%
2	Negatif	41	53,20%
3	No Data	19	24,70%
	TOTAL	77	100%
No	Leukocyturia	Frequency	%
1	Positif	50	64,90%
2	Negatif	24	31,20%
3	No Data	3	3,90%
	TOTAL	77	100%
No	Comorbid	Frequency	%
1	None	28	36,40%
2	Urolithiasis	9	11,70%
3	Urolithiasis + others comorbid	7	9,10%
4	Others	33	42,90%
	TOTAL	77	100%

## CONCLUSION

Adult patients with UTI at the inpatient installation of Jakarta Islamic Hospital Cempaka Putih for the period January - October 2018 were mostly female, aged <65 years and had length of stay <4 days. The results of blood and urine tests showed that most of the patients had leukocytosis, leukocyturia, and hematuria. Most of the patients have comorbidities.

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## CONFLICT OF INTEREST

There is no conflict of interest in this research

## ACKNOWLEDGMENT

Great appreciation to the Faculty of Medicine and Health, Universitas Muhammadiyah Jakarta and Jakarta Islamic Hospital Cempaka Putih for allowing us doing research there

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