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LIMU

The incidence rate of Asymptomatic Bacteriuria among LIMU students

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Abstract:

Asymptomatic bacteriuria (ASB) is the presence of bacteria in large amounts in the lack of urinary tract infection symptoms (UTI).

Methods:

To assess the growth of ASB, cohort research was done among 24 students at LIMU university. There were 12 females and an equal number of males in the group. As a result, 9 out of 12 females exhibited ASB growth, while only 3 out of 12 males had ASB growth. The significance of the difference between males and females was highlighted by the P value of (0.004).

Conclusion:

Asymptomatic bacteriuria is common in older people. Select physiologic aging changes and concomitant diseases, which occur with higher frequency in these populations, are the key contributing causes. There are few short- or long-term negative consequences associated with this high prevalence and incidence of asymptomatic bacteriuria, and no evidence of a survival impact.

Key world: asymptomatic bacteriuria, urinary tract infection, urine culture, youth age.

Introduction:

Asymptomatic bacteriuria, commonly termed as bacteriuria or asymptomatic urine infection, is a common occurrence in both healthy women and men and women suffering from genitourinary tract issues. When bacteriuria does not create any symptoms, it is referred to as asymptomatic bacteriuria. A bacterium with a minimum of 10^5 cfu/ml can be identified in urine samples. A uropathogen is isolated urine infection symptoms in the absence of indicators or symptoms. In hospital admissions, catheterized patients, and elderly people who are institutionalized, asymptomatic bacteriuria is prevalent. In young, healthy women, asymptomatic bacteriuria is benign. Antibiotics used to this population to treat asymptomatic bacteriuria may be hazardous, increasing the risk of symptomatic urinary tract infection.[1] Other factor for the high occurrence, according to research, could be that those surveyed belonged to the low/middle socioeconomic group. The prevalence of bacteria in a pregnant population has been shown to be influenced by socioeconomic status. [3] According to studies, bacteriuria is more common in women and is often asymptomatic with recurrence. There should be no screening or treatment for asymptomatic bacteriuria in these patient categories because there is no evidence that either screening or therapy improves clinical outcomes. The majority of prior investigations have found that females have a higher prevalence than males.[4] According to one study, the prevalence of asymptomatic bacteriuria is 2 to 3 times greater in diabetic women than in non-diabetic women. Bacteriuria is a condition that can be acute or persistent. **The goal of this study is to find out how frequent asymptomatic bacteriuria is among LIMU students of both genders.**

Materials and methods:

A total of 24 random students were tested for asymptomatic bacteriuria. There are 12 males and 12 females in this group. Urine from the midstream has to be collected in the sterile specimen bottles provided. The samples were examined under a microscope. The samples were biochemically identified after being cultivated on CLED agar.

A microscope has been used to examine the sample after the urine samples have been gram stained. If most of the following are recognized: white blood cells, red blood cells, bacteria, or yeasts cast crystals, use the Stein burner and just let it freeze for a few seconds. created a cutlery media little amounts of urine were placed in the cutler medium for one day in the incubator following one small amount of sample was deposited on a slid using a magnifying.

Culturing

The urine is collected and spread in a zigzag pattern on the Culture media Incubation for 24 hours after closing the agar with its cover is necessary to grow and maintain microbiological cultures.

The number of bacterial colonies observed on culture plates after incubation is calculated using the equation "1 x 10^5 CFU/ml"

Statical analysis

The statical analysis was done by Statistical Package for the Social Sciences (SPSS) version 26.

Discussion and Results:

In total, 9 of the 12 male subjects (75%) showed signs of bacterial growth, while 3 of the 12 total subjects (25%) were positive for growth

In the no-growth category, the expected count was 5.5, and in the growth category, it was 6.5.

Female subjects showed a total of two negative subjects in the area of no growth (16.7%). But ten positive subjects in the category of growth (83.3%)

In the no-growth category, the expected count was 5.5, and in the growth category, it was 6.5 (Table 1.)

Table 1.

gender * CFUcat Crosstabulation

			CFUcat		
			no growth	growth	Total
gender	male	Count	9	3	12
		Expected Count	5.5	6.5	12.0
		% within gender	75.0%	25.0%	100.0%
		% within CFUcat	81.8%	23.1%	50.0%
	female	Count	2	10	12
		Expected Count	5.5	6.5	12.0
		% within gender	16.7%	83.3%	100.0%
		% within CFUcat	18.2%	76.9%	50.0%
Total		Count	11	13	24
		Expected Count	11.0	13.0	24.0
		% within gender	45.8%	54.2%	100.0%
		% within CFUcat	100.0%	100.0%	100.0%

Table 1. gender (CFUcat Crosstabulation test)

The p-value is less than 0.05. Degree of freedom is 1. 0 cells have expected count less than 5.

The menimum expected count less than 5. Value of chi square is 8.224. (table 2)

Table 2.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.224[a]	1	.004		
Continuity Correction[b]	6.042	1	.014		
Likelihood Ratio	8.795	1	.003		
Fisher's Exact Test				.012	.006
Linear-by-Linear Association	7.881	1	.005		
N of Valid Cases	24				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.50.

b. Computed only for a 2x2 table

Table 2. Chi-square tests

The purpose of this study was to see if there was a significant difference in growth between males and females. The results demonstrate that females are more prone to ABU, as shown in the table.1 Females experienced growth in 83.3 percent of cases, whereas men had growth in just 25.0 percent of cases. The purpose of this

study was to see if there was a significant difference in growth between males and females. The results demonstrate that females are more susceptible to ABU, as shown in the table.1 Females experienced growth in 83.3 percent of cases, whereas men had growth in just 25.0 percent of cases. ASB has been found to be common in population over the age of 65 and those who have suffered spinal cord injuries. [6] These individuals may have non-localizing UTI symptoms such as fever, impaired sensorium, or falls. [4,6] In addition, patients with diabetes who presented with acute pyelonephritis had a decreased prevalence of typical UTI symptoms like lower urinary tract symptoms and flank discomfort, according to a study. [5] Patients with spinal cord injuries or overt diabetic bladder dysfunction, both of which can cause atypical UTI symptoms, were excluded from our study group. Before diagnosing a positive UC as ASB, clinicians should thoroughly check patients for both typical localizing and atypical non-localizing symptoms and indicators of UTI. because there are two qualitative variables, the chi-square is utilized, as shown in table 2. The assumption is met, indicating that the chi-square is the appropriate test. The p-value is less than 0.05, indicating that the ABU growth of the two genders differs significantly. "ABU affects females more than it affects males."

Conclusion:

Asymptomatic bacteriuria is characterized by the presence of bacteria in properly collected urine from a patient who has no signs or symptoms of a urinary tract infection. A wide range of topics related to asymptomatic bacteriuria have been addressed in recent publications. Further investigations assessing bacteriuria prevalence, infecting organisms, and risk factors are needed, according to observations describing the frequency of asymptomatic bacteriuria in various developing countries. Asymptomatic bacteriuria is indeed very common in clinical practice. Asymptomatic bacteriuria is rare in babies and toddlers, but it gets more common as they grow older. The most frequent etiological agent is Escherichia coli. The incidence can be as high as 15% or more in

women and men aged 65 to 80 years, and it can be as high as 40% to 50% beyond that. Asymptomatic bacteriuria will not cause symptomatic urinary tract infections in the majority of persons, and asymptomatic bacteriuria will have no terrible effects.

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