ANTIMICROBIAL MULTI DRUG RESISTANCE IN URINARY TRACT INFECTIONS

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Urinary tract infections (UTIs) are the most common bacterial diseases worldwide. UTI can be characterized by a spectrum of symptoms from mild irritative voiding to bacteremia, sepsis, or even death. Bacteria are the major causative organism and are responsible> 95% of UTI cases. Escherichia coli is the most frequent organism in acute infections. The knowledge regarding possible drug susceptibly/resistance guide to prescribe antibiotic empirically. Infections by multidrug resistance (MDR) organisms require timely and appropriate antibiotic therapy to improve patients' survival decreasing chances of antibiotic resistance. Objective: To determine the frequency of antimicrobial MDR in urinary tract infection. Methods: A Cross sectional study conducted in a Medical Unit of a tertiary care hospital Karachi (JPMC) from 5 September 2016 to 5 March 2017.Detailed history, physical examination and biochemical measurements were recorded and determined for antimicrobial Multi drug resistance. Patients with UTI diagnosis as per operational definition between age group of 25-75 years were included. Urine specimens were investigated for colony count. The result of >105 CFU/ml was considered as positive UTI and < 102 CFU/ml was negative UTI. Results of multidrug resistance were noted. To evaluate antimicrobial resistance of isolates, Kirby-Bauer's Disk diffusion method was done according to Clinical Laboratory and Standards Institute criteria. Results: Hundred and eight patients were included in this study. On analysis of demographics data 36.1%< 40 years of age & 63.9% were 0f >40 years. 55.6% were males and 44.4%were females. 32.4% had DM. 38.9% had Nosocomial infection.73.1% had duration of disease <3days. 59.3% had hospital stay < 5days. On analysis of frequency of outcome variable 26.9% had MDR. Conclusion: Antimicrobial multi-drug resistance is not uncommon in patients with Urinary tract infection. E.coli was frequently cultured organism and significantly associated with antimicrobial resistance.

Table I Frequency of various organisms cultured

Organism	Number	Percent
E. coli	39	36.1%
E. faecalis	16	14.8%
Enterobacter sp	12	11.1%
S. epidermidis	10	9.3%
P. mirabilis	09	8.3%
S. aureus	9	8.3%
Providencia sp	7	6.5%
Klebsiella sp	7	6.5%
P valgurus	6	5.6%
P.aeruginosa	5	4.6%

Table II Association of cultured organism and MDR

Variable	MDR		P value
	Positive	Negative	
E. coli			
Yes	21	18	0.000
No	08	61	
E.faecalis			
Yes	04	12	0.563
No	25	67	
Enterobacter sp			
yes	02	10	0.322
No	27	69	
S. epidermidis			
Yes	01	09	0.191
No	28	70	
P. mirabilis			
yes	02	07	0.547
No	27	72	
S. aureus			
Yes	03	06	0.453
No	26	73	
Providencia sp			
Yes	01	06	0.393
No	28	37	
Klebsiella sp			
Yes	01	06	0.393
No	28	73	
P valgurus			
Yes	01	05	0.487
No	28	74	
P.aeruginosa			
Yes	02	03	0.407
No	27	67	

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Biography:

Shumaila Tahir is a motivated and competent physician specialising in Internal Medicine and involved engrossly in National & International Researches with experienced personnels. Currently providing healthcare services based on endeavours in healthcare facilitating compassionate care from basic health to complex illness.

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