Microbiology

(Birdem Med J 2013; 3(2):126-130)

Bacteria and Antibiogram Report
July to December 2012 (Vol 2, No. 2, 21012)

Table-I

Pattern of organisms isolated from different samples

Organisms	Blood	Urine secretions	Respiratory Wound	Pus /	Total
Escherichia coli	82	1198	28	122	1430
Klebsiella sp	29	227	87	111	454
Acinetobacter sp	28	43	196	50	317
Pseudomonas sp	96	71	98	157	422
Staph aureus	21	74	16	194	305
Gr D Enterococcus sp	4	128	1	23	156
Gr D Non Enterococcus	1	16	2	4	23
Salmonella sp (Typhoid gr)	27	-	-	1	28
Poteus sp	-	6	3	85	94
Enterobacter sp	-	19	3	9	31
Candida sp	105	179	105	11	400
Streptococcus sp	-	29	-	12	41
Serratia marcesence	-	1	-	-	1
Providencia sp	-	1	-	2	3
Citobacter sp	5	73	9	32	119
Coagulase negative Staph	-	1	-	-	1
Morganella sp	-	-	-	4	4
Haemophilus sp	-	-	2	-	2
Streptococcus pneumonia	-	-	1	-	1
Flavobactenum sp	1	1	1	-	3
Corynebacterium sp.	-	-	-	-	-
Edwardsiella sp	-	-	-	-	-

Table-2

Major organisms isolated from outdoor, indoor, ICU and SCABU patients

Organisms	Outdoor N	Indoor N	ICU N	SCABU N	Total N
Ecoli	615	782	35	3	1435
Klebsiella	136	248	63	7	454
Acinetobacter	20	124	164	6	314
Pseudomonas	77	227	108	1	413
Staph aureus	123	177	12	-	312
Salmonella sp.	22	6	-	-	28
Gr D Enterococcus sp.	41	111	6	1	159
Gr D Non enterococcus	3	17	3	-	23
Candida sp.	24	276	98	55	453
Proteus sp.	37	52	3	-	92
Streptococcus sp.	23	20	1	44	
Enterobacter sp.	17	13	1	-	31
Citrobacter sp.	36	77	5	4	122
Coag NS	-	-	-	-	-

Table-III

ABST Pattern of major Gram negative organisms isolated

Antibiotics	% Resistant				
	E. coli (N=1439)	Klebsiella (N=457)	Acinetobacter (N=324)	Pseudomonas N=429	Salmonella N=28
Imipenem	2.9	18.6	80.2	67.8	ND
Ceftriaxone	70.0	66.8	93.8	84.5	0
Ceftazidime	68.7	62.7	88.9	57.5	ND
Cefixime	70.9	69.6	96.2	93.5	0
Augmentin	92.1	91.2	97.4	94.8	ND
Piperacillin	29.4	60.0	81.6	12.0	ND
Tazo/piperacillin	23.4	63.3	90.4	17.6	ND
Amikacin	12.1	29.2	80.2	62.4	ND
Netilmicin	23.4	41.4	70.4	65.3	ND
Gentamicin	33.7	47.8	86.4	73.8	ND
Ciprofloxacin	81.2	65.3	86.7	55.9	32.1
Cotrimoxazole	59.8	62.4	83.5	77.7	25
Nitrofurantoin	13.6	59.5	92.3	18	ND
Colistin	3.7	23.4	2.8	20.3	ND
Nalidixic acid	ND	ND	ND	ND	100
Azithromycin	ND	ND	ND	ND	44
Chloramphenicol	13.6	55.2	88.9	61.5	23.07
Ampicillin	ND	ND	ND	ND	38.46

Table-IV

ABST pattern of major Gram positive organisms isolated

Antibiotics	% Resistant	
	Staph aureus N=312	Enterococcus N=159
Penicillin	ND	40.1
Ampicillin	ND	13.7
Oxacillin	22.4	ND
Cephalexin	25.0	ND
Augmentin	59.1	ND
Amikacin	7.5	77.7
Netimicin	3.9	48.7
Gentamicin	14.6	37.1
Nitrofurantoin	1.4	5.0
Rifampicin	7.4	ND
Fusidic acid	9.0	ND
E hromicin	69.2	ND
Vancomycin	0	0
Cotrimoxazole	28.3	93.6

ND=Not done

Table-V

ABST pattern of major Gram negative organisms of ICU Antibiotics

	% Resistant			
	Ecoli	Klebsiella	Acinetobacter	Pseudomonas
	N=35	N=63	N=164	N=108
Imipenem	11.4	70.5	99.4	79.2
Ceftriaxone	88.6	96.8	100	89.8
Ceftazidime	88.6	96.8	99.4	66.7
Au mentin	97.1	100	100	92.5
Pi eracillin	27.3	83.3	88.9	30
Tazo/ i eracillin	50.0	73.3	95.9	22.7
Amikacin	25.7	79.4	98.8	77.8
Netilmicin	40.0	85.7	82.1	83.3
Gentamicin	45.7	87.3	100	84.3
Ci rofloxacin	91.4	95.2	100	64.8
Cotrimoxazole	70.6	90.3	93.2	66.0
Colistin	0	33.3	2.4	23.7

Table-VI

Multidrug resistant organisms isolated from various samples

Organisms	Total isolated	Category of resistant organisms	N	%
Staph aureus	312	MRSA	70	22.4
Salmonella sp.	28	NARST	27	96.3
Ecoli	1439	ESBL	481	33.4
Klebsiella s p.	457	ESBL	89	19.5
Enterobacter sp.	31	ESBL	4	12.9
Citobacter sp	119	ESBL	17	14.3
Enterococcus sp.	159	VRE	0	0

ABST= Antibiotic sensitivity test; NARST=Nalidixic acid resistant S. typhi &
S paratyphi; ESBL=Extended spectrum beta lactamase; VRE=Vancomycin Resistant enterococcus; ND = Not done

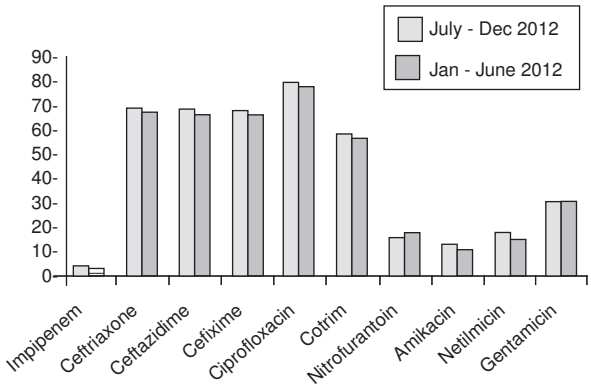

Fig. – 1 : Comparative Antibiotic resistance pattern of E.coli : July – Dec 2012 and Jan – June 2012

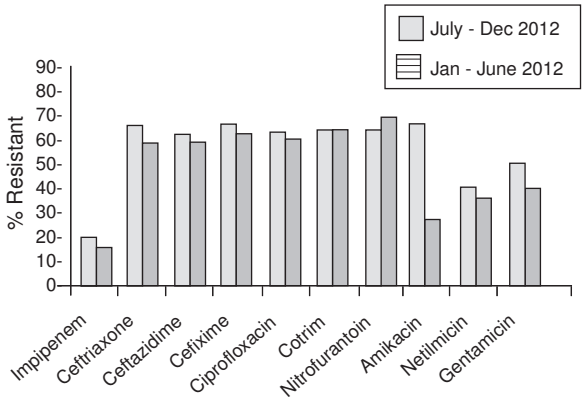

Fig. – 2 : Comparative Antibiotic resistance pattern of Klebsiella : July – Dec 2012 and Jan – June 2012

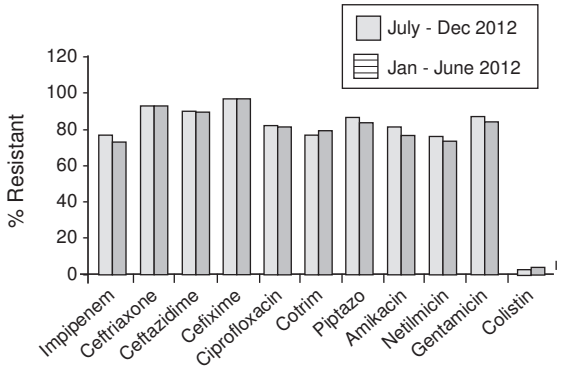

Fig. – 3 : Comparative Antibiotic resistance pattern of Acinetobacter: July – Dec 2012 to Jan – June 2012

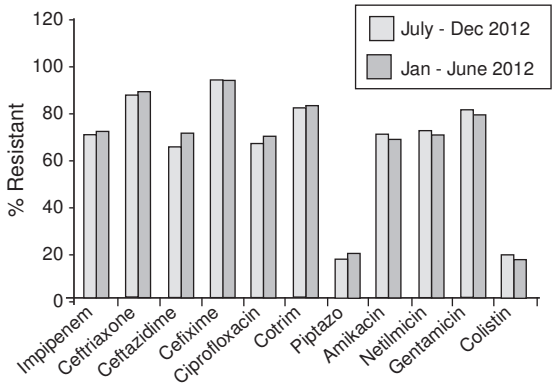

Fig. – 4 : Comparative Antibiotic resistance pattern of Pseudomonas : July – Dec 2012 to Jan – June 2012

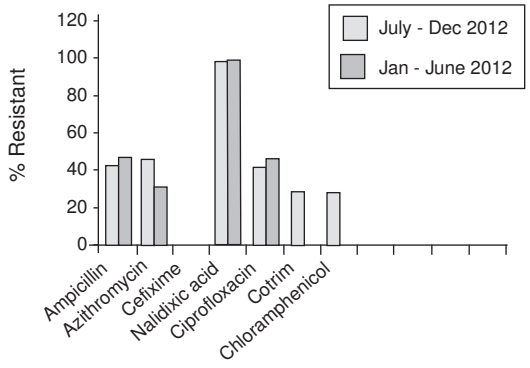

Fig. – 5 : Comparative Antibiotic resistance pattern of Salmonella :July – Dec 2012 to Jan – June 2012