BIRDEM NEWS

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Microbiology

Bacteria and Antibiogram Report
July to December 2014 (Vol 5, No. 2, 2015)

Table-I

Pattern of organisms isolated from different samples

Organisms	Blood	Urine	Respiratory Secretions	Pus Wound	Total
Escherichia coli	60	1365	46	214	1685
Klebsiella sp	42	278	141	290	754
Acinetobacter sp	35	17	293	93	438
Pseudomonas sp	60	85	109	295	549
Staph aureus	04	67	28	289	191
Gr D Non Enterococcus	07	29	-	09	38
Salmonella sp (Typhoid gr)	-	-	-	-	29
Proteus sp	29	09	05	295	249
Enterobacter sp	-	57	09	76	145
Candida sp	03	231	128	10	396
Streptococcus sp	27	41	-	14	55
Serratia marcesence	-	01	01	04	06
Providencia sp	-	-	-	-	-
Citobacter sp	5	32	03	29	64
Coagulase negative Staph	-	03	-	-	03
Morganella sp	-	-	-	-	-
Haemo philus sp	-	02	-	-	02
Streptococcus pneumoniae	-	-	-	-	-
Flavobacterium sp	01	02	03	-	06
Corynebacterium sp.	-	-	-	-	-
Burkholderia pseudomallei	-	01	-	-	01

Table-II

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

Organisms	Outdoor N=2122	Indoor N=2132	ICU N=734	ICHRI N=133	SCABU N=14	Total N=5230
Ecoli	761	831	57	30	-	1689
Klebsiella	305	335	104	17	01	762
Acinetobacter	63	66	286	26	02	443
Pseudomonas	254	179	106	10	02	551
Staph aureus	263	207	19	05	-	494
Salmonella sp.	22	04	-	01	01	28
Gr D Enterococcus sp.	65	114	-	01	-	170
Gr D Non enterococcus	13	21	04	-	-	38
Candida sp.	34	98	90	39	08	269
Proteus sp.	170	71	06	02	-	249
Streptococcus sp.	37	18	01	-	-	56
Enterobacter sp	91	49	03	02	-	145
Citrobacter sp.	32	31	01	-	-	603
Serratia	06	-	-	-	-	506

Table-III

ABST pattern of major gram negative organisms isolated

Antibiotics	% Resistant				
	E. coli (N=1685)	Klebsiella (N=759)	Acinetobacter (N=440)	Pseudomonas (N=550)	Salmonella (N=29)
Imipenem	5.1	19.4	90.1	58.3	ND
Ceftriaxone	69.7	35.4	96.1	78.8	0
Ceftazidime	69.7	66.1	94.8	63.8	ND
Cefixime	71.6	67.9	95.7	90.8	0
Augmentin	79.3	79.2	95.2	94.5	ND
Piperacillin	-	-	75.0	36.2	ND
Tazo/piperacillin	24.9	44.1	91.5	30.3	ND
Amikacin	9.9	29.6	89.5	49.0	ND
Netilmicin	8.7	28.5	78.0	54.0	ND
Gentamicin	24.1	37.4	90.0	58.4	ND
Ci rofloxacin	71.8	52.4	94.1	55.7	0
Cotrimoxazole	57.6	58.0	75.0	74.2	31.6
Nitrofurantoin	10.6	60.4	72.2	92.2	ND
Colistin	1.5	1.4	1.2	11.5	ND
Nalidixic acid	ND	ND	ND	ND	93.10
Azithromycin	ND	ND	ND	ND	27.59
Chloramphenicol	8.5	31	100	58.5	57.59
Ampicillin	ND	ND	ND	ND	37.93

Table-IV

ABST pattern of major Gram positive organisms isolated

Antibiotics	% Resistant	
	Staph aureus N=487	Enterococcus (N=291)
Penicillin	ND	27.0
Amyicillin	ND	17.3
Oxacillin	28.8	ND
Cephalexin	30	ND
Augmentin	39.6	ND
Amikacin	3.1	61.1
Netimicin	0.6	41.9
Gentamicin	5.614.3	39.3
Nitrofurantoin	2.2	13.2
Rifampicin	3.9	ND
Fusidic acid	1.5	ND
Erythromicin	72.9	100
Vancomycin	0	0
Cotrimoxazole	21.0	97.6

ND=Not done

Table-V

ABST pattern of major Gram negative organisms of ICU

Antibiotics	% Resistant			
	Ecoli (N=67)	Klebsiella (N=104)	Acinetobacter N=286)	Pseudomonas (N=106)
Imipenem	22.2	52.4	100	81.6
Ceftriaxone	90.9	92.3	100	90.6
Ceftazidime	91.0	92.3	100	75.2
Augmentin	95.5	95.2	100	94.2
Pi peracillin	-	-	100	71.4
Tazo/piperacillin	52.6	76.0	97.9	46.1
Amikacin	29.9	68.3	97.7	60.4
Netilmicin	34.3	69.2	92.7	77.1
Gentamicin	53.7	67.2	99.0	55.7
Ciprofloxacin	88.1	84.6	100	66.0
Cotrimoxazole	77.6	85.6	76.9	73.6
Colistin	0	1.0	0.37	14.9

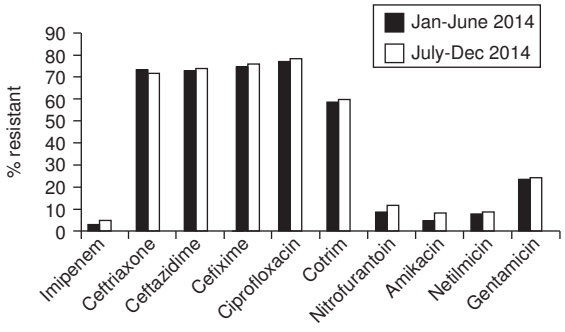
Table-VI

Multidrug resistant organisms isolated from various samples

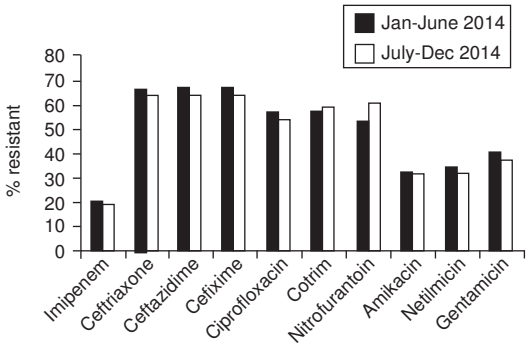
Organisms	Total isolated	Category of resistant organisms	N	%
Staph aureus	457	MRSA	141	30.85
Salmonella sp.	29	NARST	27	93.10
Ecoli	1685	ESBL	852	50.56
Klebsiella sp.	759	ESBL	1224	29.51
Enterobacters sp	145	ESBL	21	14.48
Citrobacters sp	64	ESBL	22	34.37
Enterococcus sp.	291	VRE	0	00

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

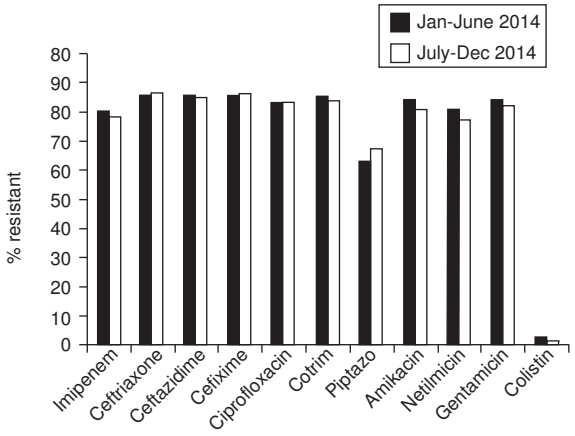
Comparative antibiotic resistance pattern of *E.coli:*
Jan - June 2014 and July - Dec 2014



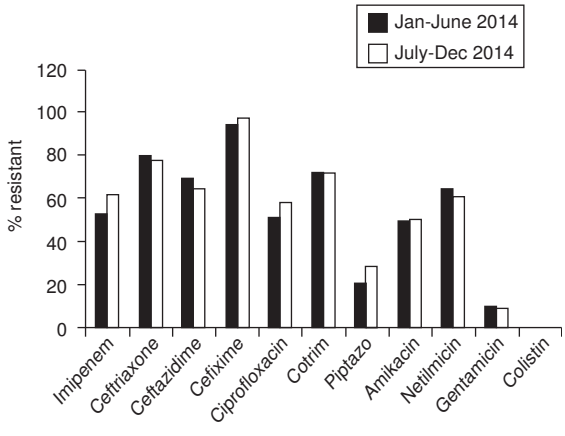
Comparative antibiotic resistance pattern of *Klebsiella:*
Jan - June 2014 and July - Dec 2014



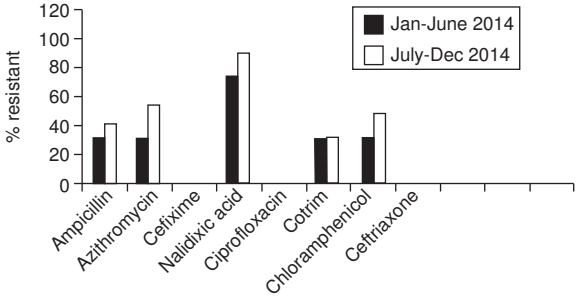
Comparative antibiotic resistance pattern of *Acinetobacter:*
Jan - June 2014 and July - Dec 2014



Comparative antibiotic resistance pattern of *Pseudomonas:*
Jan - June 2014 and July - Dec 2014



Comparative antibiotic resistance pattern of *Salmonella:*
Jan - June 2014 and July - Dec 2014



Note: All isolated s*almonella* were sensitive to Ceftriaxone