

EV0912
ePoster Viewing
Nosocomial infection surveillance & epidemiology

Bacterial infections and emerging resistance in renal transplant recipients

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Background: Renal transplantation is frequently complicated by bacterial infections in the scenario of immunosuppression, altered metabolism and interventions resulting in prolonged morbidity. Subdued clinical presentation, antimicrobial resistance and toxicity tend to jeopardize the outcome of transplantation. This study conducted at tertiary care apex transplant centre highlights colonization, clinical infection and antimicrobial resistance patterns in Renal Transplant Recipients (RTR) in comparison with nephrology ward in-patients (NIP).

Material/methods: Infection and antimicrobial resistance patterns in 130 RTR were studied. Clinicodemographic and transplant parameters were noted. Infection screening in the post-transplant period along with antimicrobial susceptibility were used to analyze data in a post-transplant time frame.

Results: Culture positivity timeline was dominated by post-surgical infections in the first week post-transplant. Urinary infections followed by blood stream infections were noted. Infection profile included simultaneous polymicrobial, prolonged and widespread infections. Multiresistant organisms producing beta lactamases and extended spectrum beta lactamases were isolated.

Conclusions: Transplant recipients remain prone to bacterial infections with multiresistant organisms which may persist due to immunosuppression, altered metabolism and toxicity and further contribute to nosocomial hazard. Infection control may be strengthened at avoidance of donor derived infections, surgical complications, epidemiologic exposures, antimicrobial prophylaxis and anti-infection engineering. Antimicrobial stewardship, outbreak and epidemic preparedness should be ensured.

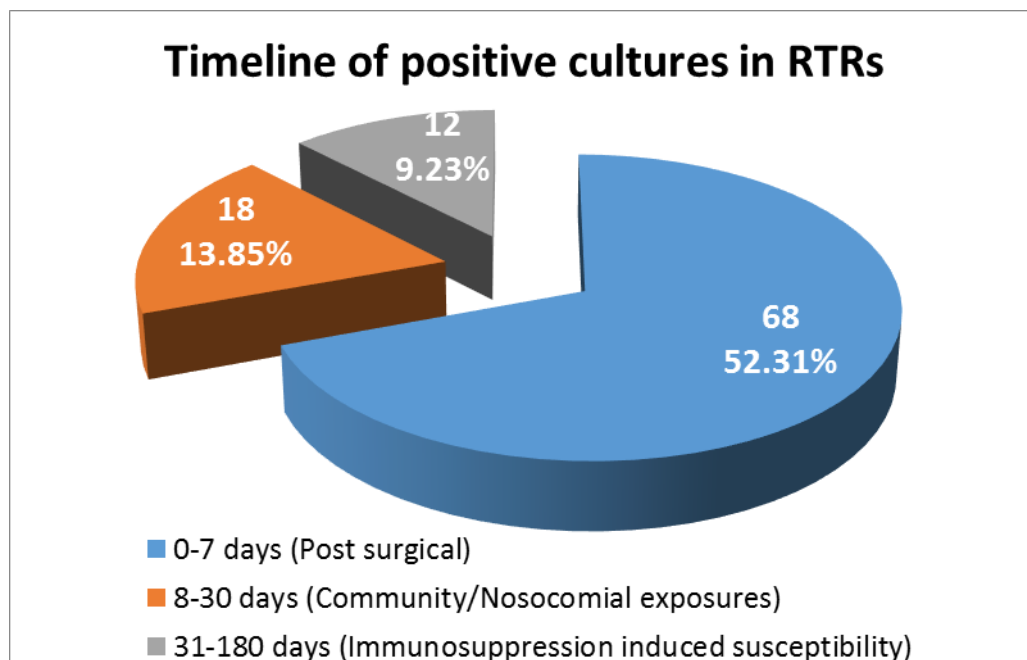


Figure: Timeline of positive cultures in Renal Transplant Recipients (n = 130)

Antimicrobials	Frequency distribution (%)					
	<i>Escherichia coli</i>	<i>Klebsiella pneumoniae</i>	<i>Acinetobacter baumannii</i>	<i>Pseudomonas aeruginosa</i>	<i>Staphylococcus aureus</i>	<i>Coagulase negative Staphylococci</i>
Coamoxiclav	11.54	Nil	-	-	38.46	3.33
Pip-Tazobactam	100	Nil	-	100	100	Nil
Ticarcillin-K clav	30.77	20	26.92	18.52	-	-
Aztreonam	7.69	Nil	-	14.81	-	-
Imipenem	84.62	50	50	29.63	38.46	3.33
Meropenem	33.33	Nil	100	66.67	-	-
Ertapenem	76.92	33.33	-	-	-	-
Cefotaxime	7.69	Nil	15.38	7.41	38.46	3.33
Ceftazidime	7.69	Nil	19.23	22.22	-	-
Ceftriaxone	7.69	Nil	23.08	11.11	38.46	3.33
Cefipime	7.69	Nil	23.08	18.52	38.46	3.33
Amikacin	61.54	33.33	30.77	18.52	-	-
Trimeth-Sulfa	11.54	20	23.08	-	69.23	43.33
Erythromycin	-	-	-	-	15.38	33.33
Azithromycin	-	-	-	-	15.38	33.33
Tetracycline	7.69	10	23.08	-	76.92	63.33
Chloramphenicol	53.85	-	-	-	53.84	89.29
Ciprofloxacin	7.69	10	19.23	29.63	30.77	20
Ofloxacin	-	-	-	-	23.08	16.67
Levofloxacin	11.54	20	19.23	29.63	23.08	20
Rifampicin	-	-	-	-	76.92	63.33
Vancomycin	-	-	-	-	84.62	80
Linezolid	-	-	-	-	100	100
Polymyxin E (Colistin)	100	100	100	100	-	-

Table: Cumulative susceptibility (%) of organisms in Renal Transplant Recipients (n = 130)