

Supplementary files

Table S1 Variables associated with developing subsequent CRAB infection during the ICU stay using sub-distribution hazard model (exposed group was those patients with intestinal carriage on ICU admission)

Item	Subsequent CRAB infection during the ICU stay		Univariate analysis		Multivariate analysis	
	Yes (n=80)	No (n=766)	SDHR (95% CI)	P	SDHR (95% CI)	P
CRAB intestinal carriage	19 (23.75%)	47 (6.14%)	3.78(2.20-6.49)	<0.001	3.42 (1.88-6.22)	<0.001
Demographics						
Sex, male	50 (62.50%)	499 (65.14%)	1.15(0.73-1.80)	0.55		
Ethnicity, Han Chinese	77 (96.25%)	697 (90.99%)	2.54(0.78-8.24)	0.12		
Age (median)	54 (42-68)	55 (44-68)	1.00(0.99-1.02)	0.85		
APACHE II	20 (15-26)	17 (12-22)	1.06(1.03-1.08)	<0.001	1.03 (1.00-1.05)	0.045
Charlson score	3 (1-5)	3 (2-4)	1.00(0.88-1.13)	1.00		
Underlying disease						
Peripheral vascular disease	11 (13.75%)	57 (7.44%)	1.62(0.85-3.10)	0.14		
Cerebrovascular disease	3 (3.75%)	33 (4.31%)	0.87(0.29-2.66)	0.81		
Connective tissue disease	1 (1.25%)	11 (1.44%)	0.78(0.11-5.73)	0.80		
Peptic ulcer	3 (3.75%)	23 (3.00%)	1.19(0.41-3.46)	0.74		
Hypertension	18 (22.50%)	173 (22.58%)	0.97(0.58-1.64)	0.91		
Tuberculosis	1 (1.25%)	12 (1.57%)	0.72(0.10-5.37)	0.75		
COPD	11 (13.75%)	45 (5.87%)	2.21(1.15-4.24)	0.017	2.71 (1.40-5.24)	0.003
Respiratory failure	34 (42.50%)	143 (18.67%)	2.38(1.52-3.72)	<0.001		
Kidney failure	5 (6.25%)	35 (4.57%)	1.13(0.474-2.7)	0.78		
Heart failure	2 (2.50%)	21 (2.74%)	1.05(0.28-3.92)	0.95		

Diabetes	11 (13.75%)	101 (13.19%)	1.03(0.54-1.98)	0.92		
Liver dysfunction	14 (17.50%)	32 (4.18%)	3.59(2.00-6.45)	<0.001	2.35 (1.30-4.25)	0.005
Hematological disease	42 (52.50%)	261 (34.07%)	1.84(1.19-2.85)	0.006		
Pancreatitis	17 (21.25%)	84 (10.97%)	1.91(1.13-3.22)	0.016		
Medical operation						
Surgery	62 (77.50%)	638 (83.29%)	0.83(0.49-1.42)	0.50		
CVC	61 (76.25%)	414 (54.05%)	2.23(1.33-3.74)	0.002		
Ventilator	72 (90.00%)	648 (84.60%)	1.62(0.80-3.25)	0.18		
Indwelling catheter	78 (97.50%)	729 (95.17%)	1.91(0.53-6.94)	0.32		
Tube feeding	54 (67.50%)	265 (34.60%)	2.71(1.69-4.34)	<0.001		
Nebulizer fiberoptic	51 (63.75%)	349 (45.56%)	1.35(0.86-2.12)	0.19		
Bronchoscope	5 (6.25%)	17 (2.22%)	1.85(0.77-4.46)	0.17		
Antimicrobial use						
Cephalosporin	15 (18.75%)	210 (27.42%)	0.54(0.31-0.95)	0.032	0.43(0.24-0.78)	0.006
Vancomycin	2 (2.50%)	28 (3.66%)	0.70(0.16-2.98)	0.63		
Aminoglycosides	1 (1.25%)	15 (1.96%)	0.50(0.07-3.52)	0.48		
Carbapenems	58 (72.50%)	284 (37.08%)	3.57(2.18-5.85)	<0.001	2.61(1.53-4.46)	<0.001
Fluoroquinolones	21 (26.25%)	127 (16.58%)	1.07(0.66-1.74)	0.79		
Antifungal agents	17 (21.25%)	123 (16.06%)	1.26(0.74-2.12)	0.39		
Cephamecins	12 (15.00%)	179 (23.37%)	0.52(0.28-0.96)	0.036		
Lincomycin	3 (3.75%)	32 (4.18%)	0.84(0.26-2.68)	0.76		
Tigecycline	8 (10.00%)	53 (6.92%)	1.36(0.67-2.76)	0.39		

COPD, chronic obstructive pulmonary disease. CVC, central venous catheter.

Variables with $P < 0.05$ in the multivariate COX analysis are highlighted in bold.

Table S2. Variables associated with developing subsequent CRAB infection during the ICU stay using sub-distribution hazard model (exposed group was those patients with ICU acquisition of CRAB intestinal carriage)

Item	Subsequent CRAB infection during the ICU stay		Univariate analysis		Multivariate analysis	
	Yes (n=93)	No (n=802)	<i>SDHR (95% CI)</i>	<i>P</i>	<i>SDHR (95% CI)</i>	<i>P</i>
CRAB intestinal carriage	32 (34.41%)	83 (10.35%)	2.35(1.56-3.55)	<0.001	1.81 (1.15-2.86)	0.011
Demographics						
Sex, male	60 (64.52%)	513 (63.97%)	1.01(0.66-1.55)	0.95		
Ethnicity, Han Chinese	87 (93.55%)	731 (91.15%)	1.32(0.56-3.08)	0.52		
Age (median)	54 (44-68)	55 (45-68)	1.00(0.99-1.01)	0.70		
APACHE II	21 (18-26)	17 (12-22)	1.05(1.03-1.07)	<0.001		
Charlson score	3 (1-5)	3 (2-4)	1.01(0.91-1.13)	0.80		
Underlying disease						
Peripheral vascular disease	11 (11.83%)	62 (7.73%)	1.34(0.71-2.53)	0.37		
Cerebrovascular disease	4 (4.30%)	36 (4.49%)	1.03(0.39-2.73)	0.96		
Connective tissue disease	1 (1.08%)	12 (1.50%)	0.68(0.09-5.07)	0.70		
Peptic ulcer	4 (4.30%)	26 (3.24%)	1.39(0.58-3.33)	0.46		
Hypertension	25 (26.88%)	191 (23.82%)	1.10(0.69-1.74)	0.70		
Tuberculosis	2 (2.15%)	11 (1.37%)	1.41(0.32-6.29)	0.65		
COPD	10 (10.75%)	54 (6.73%)	1.37(0.69-2.75)	0.37		
Respiratory failure	44 (47.31%)	159 (19.83%)	2.42(1.59-3.69)	<0.001	1.84 (1.17-2.90)	0.009
Kidney failure	7 (7.53%)	35 (4.36%)	1.56(0.75-3.28)	0.24		

Heart failure	3 (3.23%)	24 (2.99%)	1.34(0.47-3.82)	0.58		
Diabetes	11 (11.83%)	112 (13.97%)	0.75(0.40-1.39)	0.36		
Liver dysfunction	13 (13.98%)	29 (3.62%)	3.18(1.74-5.81)	<0.001	2.13(1.05-4.32)	0.037
Hematological disease	49 (52.69%)	290 (36.16%)	1.60(1.06-2.40)	0.025		
Pancreatitis	20 (21.51%)	92 (11.47%)	1.71(1.06-2.76)	0.028		
Medical operation						
Surgery	70 (75.27%)	666 (83.04%)	0.78(0.49-1.27)	0.32		
CVC	68 (73.12%)	434 (54.11%)	1.82(1.15-2.88)	0.011		
Ventilator	85 (91.40%)	683 (85.16%)	1.83(0.89-3.76)	0.10		
Indwelling catheter	91 (97.85%)	761 (94.89%)	2.37(0.58-9.63)	0.23		
Tube feeding	67 (72.04%)	300 (37.41%)	2.64(1.67-4.18)	<0.001		
Nebulizer fiberoptic	64 (68.82%)	388 (48.38%)	1.42(0.92-2.20)	0.11		
Bronchoscope	5 (5.38%)	18 (2.24%)	1.60(0.64-3.99)	0.31		
Antimicrobial use						
Cephalosporin	18 (19.35%)	213 (26.56%)	0.60(0.36-1.00)	0.051	0.59(0.35-1.00)	0.048
Vancomycin	2 (2.15%)	33 (4.11%)	0.53(0.13-2.15)	0.38		
Carbapenems	68 (73.12%)	319 (39.78%)	2.92(1.84-4.64)	<0.001	2.11 (1.27-3.50)	0.004
Fluoroquinolones	28 (30.11%)	144 (17.96%)	1.11(0.71-1.72)	0.65		
Antifungal agents	16 (17.20%)	141 (17.58%)	0.82(0.48-1.39)	0.46		
Cephameycins	15 (16.13%)	187 (23.32%)	0.56(0.33-0.98)	0.042		
Lincomycin	4 (4.30%)	34 (4.24%)	0.90(0.34-2.44)	0.84		
Tigecycline	7 (7.53%)	57 (7.11%)	0.91(0.43-1.96)	0.82		

COPD, chronic obstructive pulmonary disease. CVC, central venous catheter.

Variables with $P < 0.05$ in the multivariate COX analysis are highlighted in bold.