

Supplemental material Contents

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Table S1 Risk Factors for AKI Tested by Univariate Cox Proportional Hazards Models

	Univariate Cox proportional hazards model		
	β	RR (95% CI)	P
Demographics			
Age (per 10 years)	0.529	1.697 (1.238, 2.327)	0.001
Male	0.681	1.977 (0.983, 3.974)	0.056
Past Medical History			
Pre-existing Hypertension	0.273	1.314 (0.708, 2.438)	0.387
Diabetes	0.234	1.263 (0.627, 2.545)	0.513
Coronary Heart Disease	-0.304	0.738 (0.340, 1.601)	0.442
Symptoms			
Fever	-0.688	0.502 (0.219, 1.155)	0.105
Anorexia	-0.402	0.669 (0.334, 1.338)	0.256
Vomit	-0.585	0.557 (0.197, 1.574)	0.269
Diarrhea	-0.390	0.677 (0.323, 1.422)	0.303
Lab Tests Findings			
Anemia	-0.268	0.765 (0.399, 1.464)	0.418
Thrombocytopenia	0.465	1.593 (0.809, 3.134)	0.178
Serum IL-6 (ng/ml) ¹	0.587	1.798 (1.216, 2.661)	0.003
D-dimer Categories ²	0.273	1.314 (0.905, 1.909)	0.151
hsCRP (mg/L) ³	0.003	1.003 (0.998, 1.007)	0.252
Complications			
Shock	0.455	1.561 (0.801, 3.042)	0.191
Cardiac Injuries	0.090	1.094 (0.504, 2.373)	0.820
Coagulopathy	0.550	1.733 (0.867, 3.466)	0.120
Secondary Infections	-0.218	0.804 (0.423, 1.531)	0.507
Glucocorticoid	-0.483	0.617 (0.273, 1.396)	0.246
Treatment			
Anti-viral medications	-0.089	0.915 (0.422, 1.983)	0.822
Antibiotics	-0.044	0.957 (0.295, 3.109)	0.942
IVIg	-0.542	0.581 (0.267, 1.268)	0.173
Vasopressors	0.480	3.129 (1.220, 8.024)	0.018

IVIg: Intravenous Immunoglobulin; hsCRP: high-sensitive C reactive protein; IL-6: interleukin 6

¹64 patients (32 AKIs) were included in the analysis.

²D-dimer levels were classified into 4 categories: <0.5 as category 1, 0.5-5.0 as category 2, 5.0-21.0 as category 3 and >21.0 as category 4

³77 patients (39 AKIs) were included in the analysis.

Shock was defined hypotension requiring vasopressor therapy to maintain mean BP 65 mm Hg or greater and having a serum lactate level greater than 2 mmol/L after adequate fluid resuscitation.

Table S2 Risk Factors Predicting Death Tested by Univariate Cox Proportional Hazards Models

	Univariate Cox proportional hazards model		
	β	RR (95% CI)	P
Demographics			
Age (per 10 years)	0.265	1.303 (1.009, 1.683)	0.042
Male	0.913	2.492 (1.377, 4.507)	0.003
Past Medical History			
Pre-existing Hypertension	0.069	1.072 (0.645, 1.780)	0.789
Diabetes	-0.146	0.864 (0.456, 1.635)	0.653
Coronary Heart Disease	-0.244	0.783 (0.416, 1.476)	0.450
Lab Tests Findings			
Leukocytosis	0.618	1.855 (1.019, 3.377)	0.043
Anemia	-0.370	0.691 (0.401, 1.191)	0.183
Thrombocytopenia	0.497	1.644 (0.935, 2.889)	0.084
Hypernatremia	0.744	2.103 (1.252, 3.535)	0.005
Serum IL-6 (ng/ml) ¹	0.543	1.720 (1.238, 2.391)	0.001
D-dimer Categories ²	0.791	2.205 (1.357, 3.585)	0.001
hsCRP (mg/L) ³	0.001	1.001 (0.998, 1.005)	0.459
Elevated sCr	0.593	1.810 (1.048, 3.125)	0.033
eGFR (ml/min/1.73m ²)	-0.008	0.992 (0.985, 0.999)	0.034
Complications			
ARDS	-0.574	0.563 (0.173, 1.835)	0.341
Shock	0.540	1.717 (0.966, 3.050)	0.065
Cardiac Injury	0.494	1.638 (0.806, 3.330)	0.172
Coagulopathy	0.461	1.586 (0.903, 2.785)	0.108
Hypercapnia	0.015	1.015 (0.603, 1.709)	0.956
All AKI	0.365	1.441 (0.864, 2.402)	0.162
KDIGO Stage 3 AKI	0.745	2.107 (1.181, 3.760)	0.012
Clinical Evaluations			
APACHE II score	0.037	1.038 (1.006, 1.072)	0.021
SOFA score	0.111	1.118 (1.053, 1.187)	<0.001
Treatment			

Corticosteroids	0.275	1.316 (0.566, 3.061)	0.524
Anti-viral medications	-0.015	0.985 (0.511, 1.898)	0.964
Antibiotics	0.304	1.361 (0.425, 4.360)	0.604
IVIG	-0.731	0.481 (0.253, 0.917)	0.026

¹64 patients (56 deaths) were included in the analysis, IL-6 was calculated in ng/ml.

²D-dimer levels were classified into 4 categories: <0.5 as category 1, 0.5-5.0 as category 2, 5.0-21.0 as category 3 and >21.0 as category 4

³77 patients (45 deaths) were included in the analysis.

Table S3 The Autopsied AKI Patients Had Comparable Demographic and Clinical Features with Other AKI Patients

	Autopsied Patients (n=10)	Other AKI Patients (n=31)	P Value
Age (years)	68.8±10.2	69.9±9.1	0.765
Male : Female	8:2	22:9	0.700
Hypertension	5 (50.0%)	17 (54.8%)	0.655
Diabetes	2 (20.0%)	9 (29.0%)	0.700
Serum Creatinine (µmol/L)	107.0 (56.2-202.8)	104.0 (82.0-171.0)	0.867
eGFR (ml/min/1.73m ²)	59.4 (26.6-97.1)	53.0 (32.8-82.5)	0.638
IL-6 (pg/ml)	150.5 (57.7-385.0)	78.8 (32.6-215.4)	0.290
Shock	6 (60.0%)	22 (71.0%)	0.698
Vasopressors	8 (80.0%)	28 (90.3%)	0.580
Corticosteroids	8 (80.0%)	26 (83.9%)	1.000
Anti-viral Medications	8 (80.0%)	25 (80.6%)	1.000
Antibiotics	10 (100.0%)	28 (90.3%)	--
IVIG	9 (90.0%)	24 (77.4%)	0.653

IVIG: Intravenous Immunoglobulin; IL-6: interleukin 6.

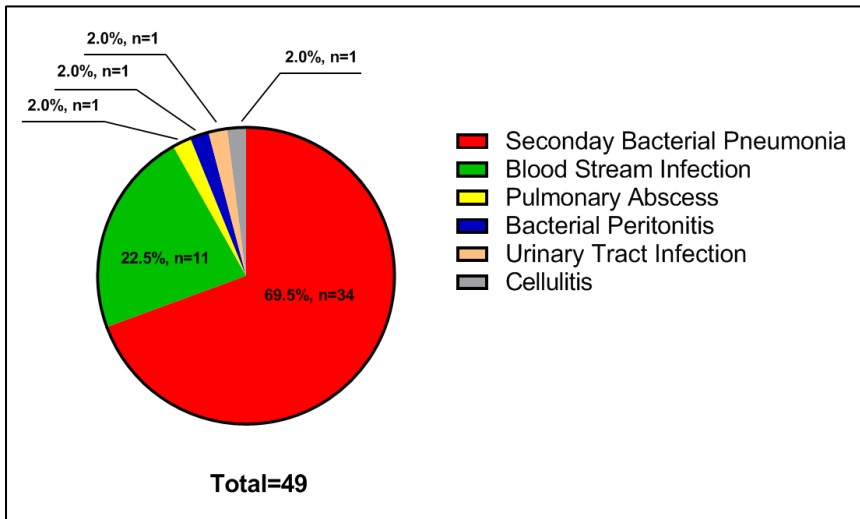


Figure S1 Compositions of Secondary Infections

47 patients experienced 49 episodes of secondary infections. Secondary bacterial pneumonia and blood stream infections were the most common. Bacterial pneumonia was diagnosed based on the symptom of newly onset fever, yellow sputum and image changes (Chest X-ray or CT scan). Blood stream infections was diagnosed based on the newly onset fever and positive blood culture. One patient's chest CT scan showed pulmonary abscess with cavities and gas-fluids levels inside. One patient who had fever, signs of peritoneal irritations after several days of diffuse bowel obstruction was diagnosed bacterial peritonitis. One patient who had newly onset of fever accompanied with cloudy urine and positive urine culture afterward was diagnosed of urinary tract infection. One patient had fever and signs of cellulitis on her left foot. All these infections happened after the hospital presentation.