

Etiology-associated Heterogeneity in Acute Respiratory Distress Syndrome

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Table E1. Microbiological tests and biomarkers recorded in the study, and the proportion of ARDS patients receiving these tests (n=258).

Laboratory tests	Tested patients, n	%
Sputum, or nasopharyngeal aspirate/swab		
Sputum smear & Gram stain	249	96.5
Sputum bacterial culture	248	96.1
Acid fast stain & Mycobacterium culture	212	82.2
Influenza rapid test or PCR	92	35.7
Influenza A+B rapid screening test	67	26.0
Influenza virus A & B real-time PCR	56	21.7
Chlamydiae antigen	132	51.2
Pneumocystis jirovecii real-time PCR	57	22.1
Microbiology, serum or plasma		
Mycoplasma pneumoniae IgM Ab	141	54.7
Plasma cytomegalovirus real-time PCR	79	30.6
Aspergillus antigen detection (ELISA)	106	41.1
Microbiology, urine		
Legionella antigen test	143	55.4
Serum or plasma (Day 1)		
C-reactive protein	178	69.0
D-dimer	107	41.5
Lactic acid	218	84.5
Albumin	192	74.4

ELISA, enzyme-linked immunosorbent assay; PCR, polymerase chain reaction

Table E2. Distribution of missing data for PaO₂/FiO₂ ratios and SOFA (Sequential Organ Failure Assessment) scores at different time points.

Variables	ARDS		Non-ARDS	
	No.	Missing data	No.	Missing data
PaO₂/FiO₂ ratio				
Day 1	258	0 (0%)	294	0 (0%)
Day 2	254	11 (4.3%)	292	37 (12.7%)
Day 3	245	20 (8.2%)	286	53 (18.5%)
Day 4	243	22 (9.1%)	277	68 (24.5%)
Day 5	239	33 (13.8%)	264	63 (23.9%)
Day 6	236	40 (16.9%)	263	85 (32.3%)
Day 7	228	52 (22.8%)	255	89 (34.9%)
SOFA, central nervous system				
Day 1	258	9 (3.5%)	294	17 (5.8%)
Day 3	245	10 (4.1%)	286	21 (7.3%)
Day 5	239	10 (4.2%)	264	22 (8.3%)
Day 7	228	14 (6.1%)	255	30 (11.8%)
SOFA, cardiovascular system				
Day 1	258	0 (0%)	294	0 (0%)
Day 3	245	0 (0%)	286	0 (0%)
Day 5	239	0 (0%)	264	0 (0%)
Day 7	228	0 (0%)	255	0 (0%)
SOFA, liver function				
Day 1	258	48 (18.6%)	294	57 (19.4%)
Day 3	245	94 (38.4%)	286	129 (45.1%)
Day 5	239	111 (46.4%)	264	137 (51.9%)
Day 7	228	97 (42.5%)	255	132 (51.8%)
SOFA, coagulation				
Day 1	258	5 (1.9%)	294	12 (4.1%)
Day 3	245	3 (1.2%)	286	13 (4.5%)
Day 5	239	6 (2.5%)	264	20 (7.6%)
Day 7	228	13 (5.7%)	255	31 (12.2%)
SOFA, renal function				
Day 1	258	9 (3.5%)	294	20 (6.8%)
Day 3	245	24 (9.8%)	286	34 (11.9%)
Day 5	239	39 (16.3%)	264	49 (18.6%)
Day 7	228	33 (14.5%)	255	58 (22.7%)

Table E3. Microbiological tests for 62 cases of acute respiratory distress syndrome with unknown etiologies.

Specimen	Tested patients, n	%
Sputum, or nasopharyngeal aspirate/swab		
Sputum smear & Gram stain	60	96.8
Sputum bacterial culture	60	96.8
Acid fast stain & Mycobacterium culture	52	83.9
Influenza rapid test or real-time PCR	33	53.2
Chlamydiae antigen	45	72.6
Pneumocystis jirovecii real-time PCR	19	30.6
Serum or plasma		
Mycoplasma pneumoniae IgM Ab	45	72.6
Plasma cytomegalovirus real-time PCR	18	29.0
Aspergillus antigen detection (ELISA)	30	48.4
Urine		
Legionella antigen test	45	72.6
Pneumococcal antigen test	11	17.7

ELISA, enzyme-linked immunosorbent assay; PCR, polymerase chain reaction

Table E4. Species distribution of bacteria in 87 cases of bacterial pneumonia associated ARDS. Sputum cultures yielded two bacterial species in 27 cases and culture data were unavailable in 3 cases.

Bacteria species	Case number	%
Gram-negative bacteria	92	82.9
<i>Klebsiella spp.</i>	23	20.7
<i>Acinetobacter spp.</i>	15	13.5
<i>Stenotrophomonas maltophilia</i>	12	10.8
<i>Pseudomonas aeruginosa</i>	11	9.9
<i>Escherichia coli</i>	7	6.3
<i>Enterobacter spp.</i>	5	4.5
<i>Burkholderia spp.</i>	5	4.5
<i>Legionella spp.</i>	5	4.5
Others	9	8.1
Gram-positive bacteria	19	17.1
<i>Staphylococcus aureus</i>	13	11.7
Others	6	5.4