

Supplementary Table 1. Comparison of groups with and without adrenocorticotrophic hormone–cortisol dissociation

Variable	Total patients (n=94)	Dissociation (n=20)	No dissociation (n=74)	P-value
Sex (female)	31/94 (33.0)	6/20 (30.0)	25/74 (33.8)	0.749
Age (yr)	64.6±16.1	63.4±19.3	64.9±15.2	0.712
BMI (kg/m ²) ^a	19.6±8.0	19.1±9.3	19.8±7.7	0.744
Comorbidity				
Malignancy	36/94 (38.3)	6/20 (30.0)	30/74 (40.5)	0.390
Chronic liver disease	8/94 (8.5)	1/20 (5.0)	7/74 (9.5)	0.526
Serum albumin (g/dl)	2.6±0.6	2.6±0.8	2.6±0.5	0.981
Serum creatinine (mg/dl)	1.7±1.5	1.8±1.6	1.6±1.5	0.603
APACHE II score	24.8±8.3	27.7±8.1	24.0±8.2	0.079
Septic shock	50/94 (53.2)	11/20 (55.0)	39/74 (52.7)	0.855
Bacteremia	18/94 (19.2)	5/20 (25.0)	13/74 (17.6)	0.454
ICU-acquired infection	19/94 (20.2)	3/20 (15.0)	16/74 (21.6)	0.513
Previous steroid use	30/94 (31.9)	8/20 (40.0)	22/74 (29.7)	0.382
Previous etomidate use	24/94 (25.5)	6/20 (30.0)	18/74 (24.3)	0.606
MV	87/94 (92.6)	18/20 (90.0)	69/74 (93.2)	0.624
CRRT	29/94 (30.9)	6/20 (30.0)	23/74 (31.1)	0.926

Values are presented as number/total number (%) or mean ± standard deviation.

BMI: body mass index; APACHE: Acute Physiology and Chronic Health Evaluation; ICU: intensive care unit; MV: mechanical ventilation; CRRT: continuous renal replacement therapy.

^aTotal patients: n=85; Dissociation: n=19; No dissociation: n=66.

Supplementary Table 2. Clinical outcomes of ACTH–cortisol dissociation in etomidate-free population

Patient not treated with etomidate	ACTH–cortisol dissociation (n=14)	No dissociation (n=56)	P-value
Hospital mortality	8/14 (57.1)	14/56 (25.0)	0.020
28-Day mortality (n=44)	3/8 (37.5)	2/36 (5.6)	0.035
90-Day mortality (n=66)	6/14 (42.9)	5/52 (9.6)	0.003
ICU mortality (n=28)	6/8 (75.0)	4/20 (20.0)	0.006
Hospital LOS	69.1±65.3	124.1±153.3	0.196
ICU LOS	37.5±56.2	27.9±46.0	0.506

Values are presented as number/total number (%) or mean ± standard deviation.

ACTH: adrenocorticotrophic hormone; ICU: intensive care unit; LOS: length of stay.

Supplementary Table 3. Differences in clinical outcome according to CIRCI defined by various criteria

Variable	CIRCI (increase in cortisol level <248.3 nmol/L from baseline) (n = 50)	No CIRCI (n = 44)	P-value
Hospital mortality	16/50 (32.0)	14/44 (31.8)	0.985
28-Day mortality	6/36 (16.7)	1/22 (4.6)	0.235
90-Day mortality	8/43 (18.6)	8/47 (17.0)	0.844
ICU mortality	5/19 (26.4)	8/18 (44.4)	0.248
Hospital LOS	116.7 ± 153.4	110.7 ± 121.4	0.836
ICU LOS	48.1 ± 82.3	64.4 ± 77.6	0.538
	CIRCI (increase in cortisol level <275.9 nmol/L from baseline) (n = 15)	No CIRCI (n = 79)	
Hospital mortality	2/15 (13.3)	28/79 (35.4)	0.132
28-Day mortality	0/9	7/49 (14.3)	0.581
90-Day mortality	1/15 (6.7)	15/75 (20.0)	0.291
ICU mortality	1/5 (20)	12/32 (37.5)	0.638
Hospital LOS	144.5 ± 218.4	144.5 ± 218.4	0.354
ICU LOS	47.5 ± 94.3	27.9 ± 44.5	0.209
	Decrease in Δcortisol in the 2nd test (n = 51)	Increase in Δcortisol in the 2nd test (n = 43)	
Hospital mortality	15/51 (29.4)	15/43 (34.9)	0.571
28-Day mortality	3/51 (5.9)	4/43 (9.3)	0.529
90-Day mortality	8/51 (15.7)	8/43 (18.6)	0.708
ICU mortality (n = 37)	9/19 (47.3)	4/18 (22.2)	0.109
Hospital LOS	108.3 ± 113.8	120.5 ± 164.6	0.672
ICU LOS	32.4 ± 53.9	29.3 ± 57.5	0.788

Values are presented as number/total number (%) or mean ± standard deviation.

CIRCI: critical illness-related corticosteroid insufficiency; ICU: intensive care unit; LOS: length of stay.