

**Supplementary Table 1: Comparison of baseline characteristics of patients with and without water diuresis**

	Water diuresis group, n=30	No water diuresis group, n=17
Age, yr median (IQR)	71 (54–83)	77 (56–82)
Female, n (%)	16 (53)	9 (53)
Community onset, n (%)	26 (87)	13 (76)
Body mass index, kg/m <sup>2</sup> median (IQR)	20 (18–23)	22 (18–25)
Symptomatic, n (%)	28 (93)	13 (76)
Severe symptom, n (%)	11 (37)	7 (41)
Moderate symptom, n (%)	17 (57)	6 (35)
<b>Comorbidities, n (%)</b>		
Myocardial infarction	0	1 (6)
Congestive heart failure	6 (20)	5 (29)
Cerebrovascular disease	0	3 (18)
Diabetes	6 (20)	7 (41)
Chronic kidney disease	1 (3)	4 (24)
Solid tumor	2 (7)	1 (6)
Charlson comorbidity index, median (IQR)	1 (1–2)	2 (1–4)
<b>Laboratory data at hyponatremia diagnosis, median (IQR)</b>		
Sodium, mEq/L	111 (108–114)	117 (110–118)
Potassium, mEq/L	4.2 (3.7–4.7)	4.7 (4.0–5.5)
Creatinine, mg/dL	0.59 (0.41–0.76)	0.96 (0.71–2.98)
eGFR, ml/min/1.73m <sup>2</sup>	102 (62–124)	54 (17–79)
Uric acid, mg/dL	3.1 (2.0–5.0)	5.7 (3.3–7.8)
Serum osmolality, mOsm/kg	232 (227–240)	243 (237–268)
Albumin, g/dL	3.9 (3.6–4.2)	3.3 (2.7–4.1)
Glucose, mg/dL	120 (103–145)	137 (97–161)
Urine sodium, mEq/L	30 (15–70)	64 (34–83)
Urine potassium, mEq/L	23 (13–35)	40 (26–49)
Urine osmolality, mEq/L	350 (251–435)	351 (297–469)
<b>Cause of hyponatremia, n (%)</b>		
Primary polydipsia	8 (27)	0
Hypovolemic	7 (23)	3 (18)
SIAD	7 (23)	7 (41)
Adrenal insufficiency	0	0
Drug related	10 (33)	5 (29)
Heart failure	1 (3)	2 (12)
Unidentified cause	2 (7)	3 (18)
<b>Daily use medication, n (%)</b>		
Thiazide diuretics	4 (13)	3 (18)
Loop diuretics	3 (10)	7 (41)
Aldosterone antagonists	4 (13)	5 (29)
NSAIDs	5 (17)	5 (29)
SSRI/SNRI	5 (17)	2 (12)
Antiseizure medication	4 (13)	2 (12)

Abbreviations: IQR, interquartile range; BP, blood pressure; eGFR, estimated glomerular filtration rate; SIAD, syndrome of inappropriate secretion of antidiuresis; NSAIDs, non-steroidal anti-inflammatory drugs; SSRI, selective serotonin reuptake inhibitors; SNRI, serotonin noradrenaline reuptake inhibitor. Categorical variables are shown as numbers (percentages) and continuous variables as medians (25–75 percentiles)

**Supplementary Table 2: Correction method and outcomes of patients with and without water diuresis**

	Water diuresis group, n=30	No water diuresis group, n=17
<b>Correction method</b>		
Infusate and fluid loss formula, n (%)	21 (70)	11 (65)
Normal saline, n (%)	17 (57)	7 (41)
Hypertonic saline bolus infusion, n (%)	11 (37)	4 (24)
Hypertonic saline continuous infusion, n (%)	13 (43)	8 (47)
Electrolyte repletion, n (%)	5 (17)	2 (12)
Loop diuretics, n (%)	2 (7)	1 (6)
Vaptans, n (%)	0 (0)	0 (0)
Dextrose 5% in water, n (%)	29 (97)	4 (27)
Desmopressin, n (%)	21 (72)	N/A
<b>Number of measurements in the first 24 hours</b>		
Serum sodium concentration	8 (6–11)	8 (6–10)
Urine volume	10 (8–12)	9 (7–10)
Urinary sodium plus potassium concentration	6 (4–7)	5 (4–6)
<b>Outcome</b>		
Change of serum sodium at 24 hours, mEq/L	8 (6–9)	6 (5–8)
Change of serum sodium at 48 hours, mEq/L	12 (9–15)	10 (9–13)
Undercorrection, n (%)	1 (3)	0
Appropriate correction, n (%)	28 (93)	15 (88)
Overcorrection, n (%)	1 (3)	2 (12)
Length of ICU stay, day (IQR)	4 (3–6)	4 (3–6)
ODS, n (%)	0 (0)	0 (0)
Mortality, n (%)	1 (3)	2 (12)
Abbreviations: IQR, interquartile range; ICU, intensive care unit; ODS, osmotic demyelination syndrome Categorical variables are shown as numbers (percentages), and continuous variables as medians (25–75 percentiles)		

**Supplementary Figure 1: Predictive correction by infusate and fluid loss formula**

