

SUPPLEMENTARY MATERIAL

Effects of hydromorphone and dexmedetomidine on diaphragmatic function in patients with acute exacerbation of chronic obstructive pulmonary disease receiving noninvasive ventilation

Zhiwei He,¹ Aiya Shu,¹ Shaoyuan Zheng,¹ Peipei Li,² Meng Xiong¹

¹Department of Critical Care Medicine, Chongqing University Fuling Hospital, Chongqing;

²Department of Clinical Pharmacy, Chongqing University Fuling Hospital, Chongqing, China

Correspondence: Meng Xiong, Department of Critical Care Medicine, Chongqing University Fuling Hospital, Chongqing, China.

Tel.: +86.199 3640 3064. E-mail: xiongmeng2013@163.com

Key words: hydromorphone, dexmedetomidine, diaphragm, chronic obstructive pulmonary disease, acute exacerbation.

Supplementary Table 1. Primary and secondary outcomes stratified by GOLD classification.

Subgroup	Variable	DEXM group	HM group	p
GOLD A/B group		n=11	n=14	
Primary outcome				
DE (cm)	D1	3.51±1.27	3.73±0.96	0.627
	D7	4.14±1.62	5.39±1.06 [#]	0.029
DTF (%)	D1	102.61±52.14	100.30±42.67	0.904
	D7	117.40±71.06	175.88±68.37 [#]	0.048
Secondary outcomes				
Duration of NIV(hours)		191±140	128±83	0.172
Length of hospital stay (days)		13.73±4.50	10.86±3.16	0.074
In-hospital mortality,n(%)		0(0)	1(7.1)	0.366
GOLD E group		n=29	n=26	
Primary outcome				
DE(cm)	D1	3.01±1.23	3.02±1.34	0.980
	D7	3.99±1.24 [#]	4.39±1.51 [#]	0.282
DTF(%)	D1	82.99±49.45	77.57±49.76	0.687
	D7	132.76±68.85 [#]	116.52±70.58 [#]	0.392
Secondary outcomes				
Duration of NIV(hours)		177±88	138±94	0.112
Length of hospital stay (days)		13.41±5.42	14.19±4.83	0.578
In-hospital mortality,n(%)		0(0)	2(7.7)	0.128

DEXM, dexmedetomidine; HM, hydromorphone; DE, diaphragmatic excursion; DTF, diaphragmatic thickening fraction; NIV, noninvasive ventilation. Time points: D1 = the first day after enrollment; D7 = the seventh day after enrollment. Significance symbols: [#]p<0.05 compared to D1.