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Title: Elective early noninvasive ventilation as a weaning method of COPD patients

Dr. Ahmed Sh. 1571 Mohamed ashawky_72@yahoo.com MD ¹ and Dr. Ibrahim 1572 Ibrahim Isalahi72@yah00.com MD ¹. ¹ Chest Department, Tanta University Hospital, Faculty of Medicine, Tanta, Gharbia, Egypt, 20 and ² Chest Department, Tanta University Hospital, Faculty of Medicine, Tanta, Gharbia, Egypt, 20 .

Body: Patients with acute exacerbations of COPD represent a large portion of critically ill patients that mechanically ventilated. The rate of weaning failure is high in these patients. Prolonged mechanical ventilation (MV) increases intubation associated complications. Objective: To determine the efficacy of early non-invasive mechanical ventilation as a weaning method in COPD patients with acute hypercapnic respiratory failure compared with the conventional-weaning approach. Methods: Study was conducted on a 30 mechanically ventilated COPD patients who had infective exacerbations. Patients were randomly extubated, receiving non-invasive ventilation (n=15), or weaned following a conventional-weaning approach (n=15). Results: compared with the conventional-weaning group, the noninvasive-ventilation group had shorter periods of invasive MV, total ventilator support, ICU stay, less incidence of ventilator associated pneumonia and less mortality. Conclusion: Patients with chronic obstructive pulmonary disease who had respiratory failure and were starting to breathe spontaneously, showed that noninvasive ventilation could decrease pneumonia, length of stay in the intensive care and the duration of ventilatory support.

Outcome parameters in both studied groups

Character	Noninvasive ventilation Group	Standard Group	P value
Number	15	15	
Duration of invasive MV (days)	6.8±3.1	18.9±6.5	<0.001
Duration of total MV (days)	14.3±8.1	18.9±6.5	<0.001
Duration of ICU stay (days)	14.6±4.2	24.5±12.9	<0.001
Incidence of VAP	1	5	<0.001
Weaning failure	2	4	<0.001
Number of death in the hospital	1	3	<0.001

P value less than 0.001 was considered significant

Ref. Manthous CA. The anarchy of weaning techniques. Chest 2002;121:1738-40.

