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Title: Comparison of pressure support and proportional assist ventilation with load-adjustable gain factors for weaning from mechanical ventilation in critically ill patients

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Body: Objective: To compare length of weaning (in hours) on ventilator (840, Puritan BennettTM, California), using Pressure support ventilation (PSV) and Proportional AssistTM Ventilation Plus (PAV+). Methods: 23 adult patients who were invasively ventilated via an endotracheal tube were included in the study after successfully completing SBT criteria. All included patients were randomized into 2 groups; PSV (n=10) mode group and PAV+ (n=13) mode group after passing 30 minutes of PSV trial. Both modes were continued unless the patients met predefined criteria either for switching to previous mandatory modes (failure criteria) or for breathing without ventilator assistance. An extubation failure was assessed within 48 hours to determine failure of weaning mode Results: Length of weaning (in hrs) which is the primary outcome is in

table 1

	PAV+	PSV
duration to wean (hours)	3.5 (2.2, 4.7)	3.5 (2.5, 4.25)
duration of ICU stay (days)	9.5 (8.25, 13)	10 (7.75, 15)
days to extubate	7 (5.25, 9.75)	7.5 (6.25, 9.5)

above values represent median and quartiles

The average length of ICU stay, duration to wean and days to extubate was almost similar in both the groups, with no significant statistical difference. Conclusion: There is no significant difference in duration of ICU stay and weaning hours between both the groups. Though the study lacks in statistical power, few important clinical aspects is noticed among patients weaned using PAV+ mode. It may be concluded that PAV+ mode can be used with equal efficiency in selective patients, and may offer significant advantage

over PSV in both successful weaning and successful extubation.