

P176 Cardiorespiratory measurements during weaning from mechanical ventilation in critical care patients: comparison of pressure support ventilation and T-piece SRR Vieira, AD Costa, MM Rieder

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Introduction Weaning from mechanical ventilation in critical care patients is responsible for alterations in cardiorespiratory function. However, it is not clear whether different methods of weaning are associated with different cardiorespiratory responses. The goal from this study was to compare cardiorespiratory measurements during pressure support ventilation (PS) and during T-piece.

Materials and methods Twenty patients in the weaning process (57 ± 15 years) were studied in this crossover randomized clinical trial comparing PS and T-piece. Variables recorded at 0, 15 and 30 min in each method included: mean arterial pressure (MAP), heart (HR) and respiratory (RR) rates, arterial oxygen saturation (SaO_2), end-tidal CO_2 (PetCO_2), tidal volume (V_t), minute ventilation (V_E), total work of breathing (WOB), mean airway pressure (P_{mean}), changes in ST segment in the electrocardiogram and presence of arrhythmias. The t test, ANOVA and χ^2 tests were used in the statistical analysis. The level of significance was $P < 0.05$.

Results The comparison between PS and T-piece showed that: no significant difference was observed in MAP and HR; values of SaO_2 , PetCO_2 , V_t , V_E , total WOB and P_{mean} were significantly higher with PS at 0, 15 and 30 min ($P < 0.05$); values of RR were lower with PS, at least at 0 and 15 min ($P < 0.05$), and they increased from 0 to 30 min ($P < 0.05$); alterations in ST segment (nine patients in each method) as well as the occurrence of arrhythmias (four in each method) and of sinus tachycardia (five in each method) were similar.

Conclusion Comparing PS with T-piece, no differences were observed concerning cardiovascular measurements or electrocardiographic evaluation, but a better response was observed in the respiratory pattern and oxygenation.

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