

European Respiratory Society Annual Congress 2012

Abstract Number: 1951

Publication Number: P1177

Abstract Group: 9.2. Physiotherapists

Keyword 1: Intensive care **Keyword 2:** Children **Keyword 3:** Physiotherapy care

Title: Comparative evaluation of vibrocompression and bag squeezing: A randomized study

Ms. Letícia 10465 Matins leticiaqm.fisio@hotmail.com.br , Ms. Livia 10466 Freitas livita2003@hotmail.com , Ms. Suzilaine 10467 Bacci sll.santos@bol.com.br , Dr. Lilian 10468 Abreu lilianrabreu@hotmail.com , Prof. Dr Lucio 10469 Araújo lucio@famat.ufu.br and Prof. Dr Célia 10470 Lopes celialopesfisio@gmail.com . ¹

Physiotherapy Department, Clinical Hospital of Federal University of Uberlandia, MG, Brazil, 38400000 ; ²

Physiotherapy Department, Clinical Hospital of Federal University of Uberlandia, MG, Brazil, 38400000 ; ³

Physiotherapy Department, Clinical Hospital of Federal University of Uberlandia, MG, Brazil, 38400000 ; ⁴

Physiotherapy Department, Clinical Hospital of Federal University of Uberlandia, MG, Brazil, 38400000 ; ⁵

Mathematic Department, Federal University of Uberlandia, MG, Brazil, 38400000 and ⁶ Physical Education and Physiotherapy Department of Federal University of Uberlandia, Federal University of Uberlandia, Uberlandia, MG, Brazil, 38400000 .

Body: INTRODUCTION: Few scientific evidence has demonstrated the effects of respiratory physiotherapy in intubated children. The clearance maneuvers in mechanical ventilation in this population require further investigation. OBJECTIVES: Analyze and compare the hemodynamic effects, ventilation and respiratory mechanics of two techniques in intubated children with respiratory failure. METHOD: Eleven children with mean age of 28.42 ± 15.42 month were randomized into two groups according to the technique used: (1) Bag Squeezing (BS; n=5) and (2) vibrocompression thoracic (VCT; n=6). All variables were studied before, immediately and 30, 60 and 120min after the maneuvers ($p < .05$). RESULTS: for both groups were found similar results, no significant differences. Heart rate and mean blood pressure presented higher in BS group in the post maneuver ($p = .04$, $p = .43$) compared with pre maneuver. The HR, ETCO₂, plateau pressure and static compliance were also higher in the post-maneuver in VCT group. There was no significant difference in the other respiratory variables or respiratory mechanics. Significant negative correlation between Rst e Cst was observed in the BS at all the times evaluated ($R = .97, p = .00$; $R = .89, p = .04$; $R = .75, p = .00$) The same results were observed for VC and ETCO₂ post maneuvers ($R = .90, p = .03$). In the VCT was found positive correlation between the Rst and the Pp before maneuver ($R = .97, p = .01$), 30 ($R = .94, p = .00$) and 120min post ($R = .66, p = .00$) and between VC and ETCO₂. There was also a positive correlation between VC and ETCO₂ immediately after maneuver ($R = .82, p = .04$) and 30 min post ($R = .87, p = .02$). CONCLUSION: Both techniques didn't present changes in hemodynamic and ventilatory responses, even in the respiratory mechanic.