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Title: Bag-squeezing maneuver in experimental model of meconium aspiration syndrome in newborn pigs

Prof. Dr Talitha 17555 Comaru talihacomaru@hotmail.com [1], Ms. Jaqueline 17556 Stivanin jaquebstivanin@hotmail.com [2], Ms. Priscila 17557 Padoin pri.padoin@gmail.com [2] and Prof. Dr Humberto 17558 Fiori hfiori@pucrs.br [2]. [1] Intituto de Educação e Pesquisa, Hospital Moinhos de Vento, Porto Alegre, RS, Brazil, 90 035 001 and [2] Faculdade de Medicina, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, RS, Brazil, 90 610 000 .

Body: Introduction: The use of broncho alveolar lavage (BAL) and surfactant therapy has been tested in humans and in animal models getting promising results as well as Bag-squezing maneuver has shown good results in adults. Aims: To evaluate the effects of the combination of Bag Squeezing maneuver with broncho-alveolar surfactant in an experimental model of Meconium Aspiration Syndrome in newborn pigs. Methodology: were used in the study newborn pigs (n = 15), ventilated with fixed parameters. After instillation of human meconium 4ml/Kg diluted to 20%, the pigs were randomized into three groups: CONTROL-SAM model subjected only aspiration (n = 5), Grupo BAL-SAM model treated only with surfactant BAL (n = 5), and Grupo BAL + BAG-SAM model treated with BAL with surfactant associated with Bag Squeezing maneuver (n = 5). For the LBA was used 15ml/kg of Curosurf™ diluted in NaCl (5mg/ml). Blood gases, vital signs and behavior of mechanical ventilation were analyzed throughout the study. Results: The that group received a BAL + BAG improved blood gas, reducted of airway resistance (p = 0, 004) and compliance lung (p = 0.003) better than the other groups with a significant increase in the amount of meconium removed (p = 0.046) with the bag-squeezing maneuver. Conclusion: The association of Bag-squeezing maneuver can bring benefits to gasometric parameters mechanical ventilation and increase the removal of meconium.