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Title: Experimental model of atelectasis in newborn pigs

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Body: Background: there are few studies using animal models in chest physiotherapy, moreover, there are no models to assess these effects in newborns. Aims: the objective of this study was to develop a model of atelectasis by bronchial obstruction in newborn pigs for the study of neonatal physiotherapy. Methods: newborn pigs resulting from a cross-breeding between Large White and Landrace, properly sedated, anesthetized, tracheostomized, paralyzed and mechanically ventilated were used. The animals received artificial mucus infusion through an infusion pump, underwent radiological assessment of the lungs and blood gas analysis was performed to confirm the production of atelectasis. Results: the model showed consistent results between parameters of oxygenation and radiological analysis. The atelectasis model was successfully developed in over 70% of cases, surpassing 90% of attempts in the final phase of the study. Conclusions: this model of atelectasis showed results consistent enough to be used in studies of chest physiotherapy techniques in newborn pigs.