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1. Initial high level CPAP leads to a higher increase in pulmonary blood flow without causing lung overexpansion when compared to an initial low level CPAP during transition at birth in a spontaneously breathing preterm animal model. *This thesis.*
2. Physiological based (PB)-CPAP leads to a prompt increase in heart rate in preterm infants at birth, which reflects establishment of lung aeration. *This thesis.*
3. The larynx functions as a pressure transmission regulator, protecting the lung from overexpansion during CPAP. *This thesis.*
4. Caregivers are reluctant to use high CPAP levels in preterm infants at birth, while they apply similar mean airway pressures when intermittent positive pressure ventilation is given. *This thesis.*
5. Dynamic CPAP changes used in PB-CPAP are difficult to perform, therefore PB-CPAP should be automated or the approach should be simplified for caregivers. *This thesis.*
6. Closure of the larynx immediately after birth greatly restricts the ability of mask ventilation to aerate and ventilate the lung unless the infant assists by attempting to breathe, which is consistent with observations in humans. *Adapted. Crawshaw JR et al. Arch Dis Fetal Neonatal Ed. 2018 Mar;103(2):F112-F119.*
7. Airway resistance decreases markedly during the initial phase of transition and this reduction follows an exponential function that is difficult to predict. *Hooper SB et al. The physiology of neonatal resuscitation. Curr Opin Pediatr. 2018 Apr;30(2):187-191.*
8. To improve neonatal care effectively, interventions investigated in clinical trials should be based on scientific knowledge gathered. *Adapted. SB Hooper et al. Animal models in neonatal resuscitation research: What can they teach us? Semin Fetal Neonatal Med. 2018 Oct;23(5):300-305.*
9. We must design for the way people behave, not for how we would wish them to behave. *DA Norman, The Design of Everyday Things, 1988. Caregivers should be considered when adjusting the current PB-CPAP strategy.*
10. Just because something works, doesn't mean it can't be improved. *Shuri, Black Panther, 2018. While the current CPAP recommendations have been used for several years, this thesis shows that the pressures used for CPAP support in the delivery room should be reconsidered.*
11. A failure is not always a mistake. It may be the best one can do under the circumstances. The real mistake is to stop trying. *BF Skinner, Beyond Freedom and Dignity, 1971. While this trial was stopped prematurely, it still is an undeniably valuable contribution to future studies that investigate CPAP support at birth.*
12. Life is not about the goal. It is about doing whatever you want. *Siffan Hassan, 2021. When starting a PhD curriculum out of enthusiasm, you will seize more than just a thesis.*