

30323**SUCKLE-SWALLOW-BREATHING PATTERN IN BREASTFED FULL TERM NEWBORN INFANTS ASSESSED BY DIGITAL CERVICAL AUSCULTATION**

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INTRODUCTION: Full term newborns are expected to have the ability of coordinated sucking-swallow-breath (SSB) process whereas preterm infants have uncoordinated swallowing prior to 34 weeks of postconceptional age (PCA). Several studies have shown the SSB process in full term newborns on bottle feeding but there is a lack of studies showing the SSB process on breastfeeding. **OBJECTIVE:** This study aimed to assess the coordination of suckingswallowing-breathing pattern of full term infants at the initiation of breastfeeding and compare it with preterm infants at the initiation of oral feeding by using a microphone through a cervical digital auscultation. **METHODS:** Thirty-two full term infants (38-41weeks PCA) on exclusive breastfeeding assessed during the 48hs postnatal age and 32 preterm infants (34-36weeks PCA) at the transition from tube feeding to oral feeding were assessed. Exclusion criteria for all infants included respiratory distress, infection requiring antibiotics, congenital abnormalities, intraventricular hemorrhage grades III and IV. Data regarding pregnancy, birth and current clinical status were obtained from the patient's records. All infants underwent digital cervical auscultation whilst being fed by using a piezoelectric microphone connected to the neck and signals were recorded (Raven software, version 1.1). Mean values of 3 audiosignal recordings of 30s were used for each infant. Burst was considered as either sucking or swallowing. The following variables were analyzed to assess SSB pattern: a) number of groups of bursts in 30s; b) number of bursts in 30s; c) number of pauses >2.5 s in 30s; d) total duration of the pauses; e) total duration of bursts. The number and duration of pauses quantify the breathing time the infants take whilst feeding. **RESULTS:** Total duration of bursts was significantly higher in preterm (19.38 ± 4.30) than full term infants (12.58 ± 5.68), $p < 0.001$. Number of pauses in 30s was significantly higher in full term (2.50 ± 0.81) than preterm infants (1.96 ± 0.83), $p = 0.01$. Moreover, total duration of pauses was also significantly higher in full term (17.41 ± 5.68) than preterm infants (10.23 ± 4.20), $p < 0.001$. There was no significant difference in the parameters "number of groups of bursts in 30s", "number of bursts in 30s", between the preterm and full term infants. **CONCLUSION:** Full term breastfed infants within first days of life have prolonged respiratory pauses during the suckle-swallow-breathing process. This may reflect the development of the mature pattern of swallowing process with lifelong beneficial consequences.