# The Effectiveness of Slow Infusion Intermittent Feeding on Gavage Feeding-associated Cardiorespiratory Deterioration in Infants in NICU

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**Background** We aimed to see whether slow infusion intermittent feeding (SIIF) can reduce respiratory deterioration during gavage feeding in preterm infants.

**Methods** A total of 34 preterm infants, whose gavage feeding method was changed to SIIF (1-hour infusion with an infusion pump and 2-hour rest with a 3-hour interval) from bolus feeding using gravity due to feeding-associated cardiorespiratory deterioration were retrospectively reviewed.
**Significant cardiorespiratory event** was defined as desaturation below 80% or a bradycardia below 80bpm.
**Feeding related cardiorespiratory event** is defined as cardiorespiratory event that occurs during or within 30 minutes after feeding.

**Results** Total frequency of desaturation or bradycardia was significantly decreased after the application of SIIF (8.94 vs 5.03, p=0.001). The frequency of feeding related bradycardia and desaturation was also significantly decreased (4.15 vs 1.68, p=0.008). 11 out of 34 subjects (32.4%) decreased in ventilatory support, 16 (47%) had same ventilator support, 7 (20.6%) increased the level of respiratory support within 1 day after initiation of SIIF. Respiratory severity score is significantly decreased after SIIF (5.24 vs 4.59, p=0.032) among 10 patients who were on invasive ventilator.

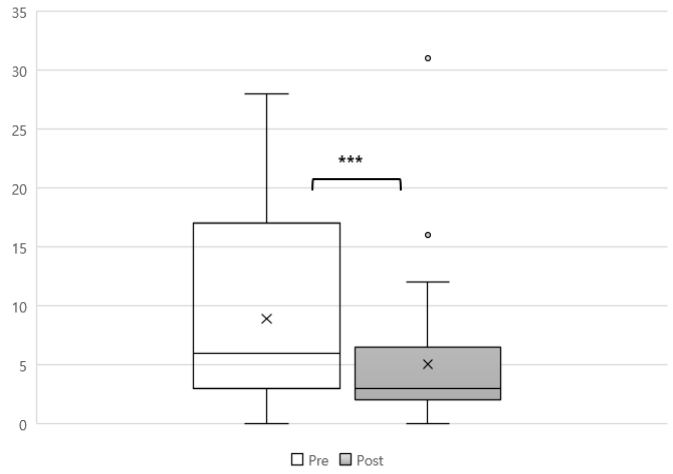


**Figure 1.** Comparison of total event frequency


**Figure 2.** Comparison of feeding related event frequency

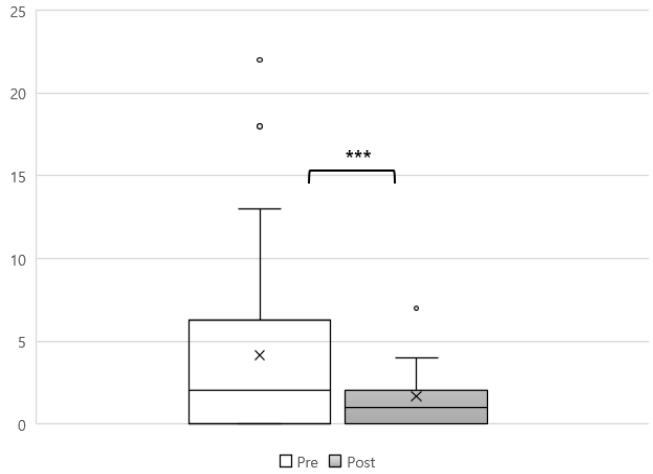


**Figure 3.** Comparison of respiratory severity score in 10 patients with invasive ventilator

**Conclusions** SIIF significantly decreased gavage feeding-associated cardiorespiratory events and enabled level down of respiratory supports in about one-third of subjects. SIIF can be a therapeutic option for gavage feeding-associated respiratory deterioration in preterm infants in the NICU.