



# Neurally adjusted ventilatory assist (NAVA) and postnatal growth

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I read with interest the article by Benn et al. [1] suggesting that using neurally adjusted ventilatory assist (NAVA) ventilation in premature infants leads to an improvement in their growth trajectory. For nutritional assessment, the authors mentioned only two data points, *z*-scores at birth and discharge. However, it has been shown that a *z*-score alone could not be an indicator of adequate growth. Recently, Rochow et al. [2] showed that *z*-score overestimated the growth failure among very low birth weight (VLBW) infants. They reported that 23% of VLBW infants with negative *z*-score differences had weight gain velocity above the 50th percentile's growth rate. They suggested using the weight gain ratio in adjunct to the *z*-score for better monitoring of the growth trajectory.

Among the nutritional data, Benn et al. [1] only mentioned the type of milk at discharge. Was the milk fortified or supplemented with protein? In the data, necrotizing enterocolitis (NEC) rates were reported to be higher in the NAVA group. Was the group fed aggressively? Recently, Brinkis et al. [3] showed better growth with early progressive enteral feeding in VLBW infants. Furthermore, it was interesting to note that the NEC rates were double in the NAVA group (22% versus 11%) and they had better growth, which was contrary to the previous reports. NEC has been associated with growth delays and longer hospital stays. Ofek et al. [4] have shown a 14–50% severe postnatal growth failure in infants with NEC.

Benn et al. [1] speculated that decreased work of breathing (WOB) in the NAVA group might have resulted in less energy consumption causing a better weight trajectory. Was WOB measured directly or indirectly? What were the caloric intake and output balance? Was the NIV-NAVA group fed by the NAVA nasogastric tube (NGT) longer than the control?

Oral attempts increase the workload on the infants, and they may consume more calories. Maybe the NAVA group received longer parental nutrition, higher caloric intake, and longer NGT feeds and that is why they had better growth.

Without the details of comparative nutritional data, improved discharge *z*-score among NAVA infants could just be an incidental finding.

**Author contribution** Dr. Manzar conceptualized the study and wrote the draft.

## Declarations

**Competing interests** The authors declare no competing interests.

**Conflict of interest** The authors declare no competing interests.

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