appropriate, the pressure needed to achieve that volume is irrelevant.

(*b*) As some people remain unhappy using high peak inspiratory pressures, the alternative is to switch to high frequency oscillation.

(*c*) It is always important with any mode of ventilation to check that the amount of ventilator support required is in line with the clinical situation. If not, other contributory causes of poor ventilation (*e.g.,* blocked endotracheal tube, pneumothorax) should be excluded .

2. Infants can actively tighten their abdominal muscles that can prevent gas entering the lungs during inflation; often termed 'splinting' [3]. Forced expiration and splinting cause hypoxemic episodes due to low lung volume and low VT delivery, causing obstruction' and 'low VT' alarms. ***Fig.* 1** shows a recording from a 1000-g baby ventilated with assist control (AC) and VG ventilation at a rate of 50 per min, a set peak inflating pressure (PIP) of 40 cm H2O, and a set VT 5 mL. It illustrates the effect on the inflating pressure when the baby tightens the abdominal muscles enough to temporarily stop inflation. This is preceded by active expiration. During the first ten inflations, the pressure is modulated to maintain the expired VT. During inflations 7, 8 and 9, the expired VT is larger than set VT and so the pressure is reduced. At inflation 10, there is a very small VT, and therefore the pressure is increased by 3 cm H_2O for each inflation for the next five untriggered inflations until a VT is produced. This is then followed by triggered inflations at a similar inflating pressure to the start of this recording, with one untriggered inflation in between. A higher Pmax setting may allow the ventilator to increase the PIP and overcome the obstruction more quickly [4].

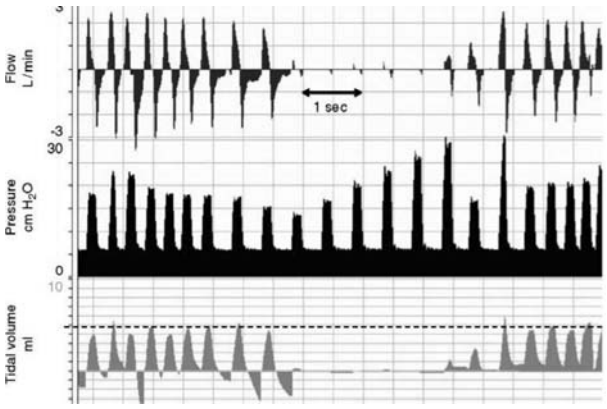

FIG. 1 *Ventilator recordings showing effect of 'splinting' in a neonate on Assist Control Volume Guarantee Ventilation.*

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REFERENCES

1. Razak A. Guaranteeing the volume guarantee ventilation. Indian Pediatr. 2015;52:444.
2. Keszler M. Volume-targeted ventilation. Neo Reviews. 2006;7:e250-7.
3. te Pas AB, Wong C, Kamlin CO, Dawson JA, Morley CJ, Davis PG. Breathing patterns in preterm and term infants immediately after birth. Pediatr Res. 2009;65:352-6.
4. Klingenberg C, Wheeler KI, Davis PG, Morley CJ. A practical guide to neonatal volume guarantee ventilation. J Perinatol. 2011;31:575-85.

Effective Strategy for Newborn Screening for Congenital Hypothyroidism

With reference to the recent publication [1] on screening of hypothyroidism, we wish to submit following observations:

Authors have reported that total number of patients under study was 1950 while the total as per the table is 1952. In text, authors state that there were 397 premature and 1551 full term neonates. This makes the total 1948! It is also remarkable that the male to female ratio is 0.53:1 (682 males to 1268 females).

Authors state that they could pick up one extra case with cord blood cut-off of 10 mg/mL but they had false positive rate of 20% in the bargain. Authors report that they repeated thyrotropin stimulating hormone (TSH) at 72 hours for screen positives, and those with rising trends were evaluated at day 5 and day 12. With this protocol a baby with congenital hypothyroidism with raised cord blood TSH with steady or little less TSH at 72 hours is likely to be missed. Guidelines by American Academy of Pediatrics [2] do not mention a rising trend but values

above cut-off for repeat sample to be considered screen positive if first sample is an early sample [2].

With the study methodology, every 5th baby had to be called for repeat evaluation resulting into higher costs as well as unnecessary parental anxiety. This could have been easily avoided with first screen sample after 72 hours followed by recall of screen positives for confirmation. In case of premature babies, repeat sampling could have been done later (may be at 2 weeks) in view of delayed maturation of hypothalamus-pituitary-thyroid axis [2,3]. Authors also have not mentioned whether the hypothyroid newborn with cord blood thyroxine of 18 mU/L was preterm or the mother had thyrotoxicosis. Authors also should have stated whether the two hypothyroid babies picked up at 2 weeks had prematurity or any accompanying maternal condition.

The findings of this study once again stress the importance of sampling after the TSH surge is over and having a proper cut-off to minimize false positive rate. Sampling at 4 or 5 days followed by recall of screen positives for confirmatory test will involve sampling only twice as against 3 or 4 times as in this study. As cord blood TSH is known to have higher false positive rate, this strategy may increase the cost and parental anxiety [4,5].

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REFERENCES

1. Anand MR, Ramesh P, Nath D. Congenital hypothyroidism screening with umbilical cord blood: Retrospective analysis. Indian Pediatr. 2015;52:435-6.
2. American Academy of Pediatrics, Susan R. Rose SR, MD, and the Section on Endocrinology and Committee on Genetics, American Thyroid Association, Brown RS, and the Public Health Committee, Lawson Wilkins Pediatric Endocrine Society. Update of newborn screening and therapy for congenital hypothyroidism. Available from: *www.pediatrics.org/cgi/doi/10.1542/peds.2006-0915*. Accessed June 14, 2015.
3. Bhatia V. Congenital hypothyroidism is not always permanent: Caveats to newborn thyroid screen interpretation. Indian Pediatr. 2010;47:753-4.
4. Gupta A, Srivastava S, Bhatnagar A. Cord blood thyroid stimulating hormone level – Interpretation in light of perinatal factors. Indian Pediatr. 2014;51:32-7.
5. Gambhir PS. Cord blood TSH for screening of hypothyroidism: Is it justified? Indian Pediatr. 2014;51:503.

Effective Strategy for Newborn Screening for Congenital Hypothyroidism: Author's Reply

We are extremely grateful to the authors for their valuable comments:

1. The total number of samples were 1950. The error in the article is regretted.
2. We have presented the sex distribution as obtained in the study sample. This need not be representative of general population.
3. We do not believe and claim that our screening strategy was fool-proof. We started cord blood screening at a time when universal thyroid screening was not mandatory through the state. Even now, its not being done in many centers. Our main aim was to find out the general pattern and to find out the incidence. We do agree with the authors that a better screening strategy can be employed.
4. Cord blood TSH of 18 mU/L was observed in a term baby; mother had no known thyroid morbidities.
5. Cases diagnosed at 2 weeks of age were late preterm babies without any maternal thyroid illness.

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Temporal Lobe Epilepsy Masquerading as Tetany

A 7-year-old female child presented in the Pediatric Neurology clinic of our hospital with history of three episodes of tetanic carpopedal spasms in past one month. The first episode occurred when she was studying and suddenly felt numbness and tingling of both lower extremities followed by of upper extremities. She then developed spasm of both wrists and posturing suggestive of carpopedal spasm. She was taken to the nearest Emergency room where she was given injection calcium gluconate after which she improved and was discharged on oral calcium. Serum calcium was not done because of