We thank Bou Aram and Fernandes for their letter regarding our observational study on the effect of high-flow nasal cannula use in a neonatal population. We would like to address some of the issues they raised.

We submit that measuring oral cavity pressure is an easy way to estimate the “level” of continuous positive airway pressure (CPAP) administered under clinical situations, which in our unit is usually between 4 and 6 cm H₂O. We made measurements in enough infants of different weights and ages to convince ourselves that these measurements, when made under the conditions of our study (ie, mouth closed), approximated the pressure measured in the CPAP device. Although we do not advocate the use of heated high-flow nasal cannula therapy as a replacement for standard techniques of delivering nasal CPAP, measuring oral cavity pressure is an easy way to confirm that some level of CPAP is or is not being provided.

It was not our intent to study the popularity of high-flow nasal cannula therapy, the frequency of its use in comparison to nasal CPAP, or whether it has changed over time. We do believe that this approach, even when using low flow rates, has advantages over the use of standard nasal cannula therapy for the delivery of oxygen, because it provides gas that is heated and humidified. Indeed, it is not clear to us why many continue to provide unheated and only partially humidified gas through nasal canulas to small infants. We caution, however, that the use of high flow rates, especially in the smallest infants with tight-fitting nasal prongs, could lead to unanticipated and possibly dangerously high pressures.

Finally, it was our hope that our simple “physiological” study would stimulate interest in a larger randomized study, as Bou Aram and Fernandes suggest. We strongly agree that future randomized studies are needed to address the usefulness of this oxygen-delivery method in treating apnea of prematurity or as substitute for conventional CPAP in a larger neonatal population.

In Reply.—

We applaud the recently published population-based study by Zahl and Wester, which demonstrates the importance of routine measurement of head circumference (HC) in infancy, and we wish to further emphasize the long-term benefit. Of 173 children diagnosed with idiopathic normal-pressure hydrocephalus who were aged ≥66 years that 20% had a HC above the 90th percentile,2 which is 10% more than predicted and, we have concluded, represents congenital hydrocephalus that remained asymptomatic until late in adult life.3 Many of our patients were born before the 1940s when pediatricians started measuring HC routinely, and many of those with large heads told us that they had difficulty fitting into hats or were teased about their head size during childhood.

We also note that we are frequently asked to evaluate young adults with previously unrecognized and, thus, untreated hydrocephalus who have a HC above the 97th percentile. Some patients are asymptomatic and are fol-

REFERENCES


What We Gain by Measuring Head Circumference

To the Editor.—

We applaud the recently published population-based study by Zahl and Wester, which demonstrates the importance of routine measurement of head circumference (HC) in infancy, and we wish to further emphasize the long-term benefit. Of 173 children diagnosed with idiopathic normal-pressure hydrocephalus who were aged ≥66 years that 20% had a HC above the 90th percentile as measured by adult norms, which is 10% more than predicted and, we have concluded, represents congenital hydrocephalus that remained asymptomatic until late in adult life. Many of our patients were born before the 1940s when pediatricians started measuring HC routinely, and many of those with large heads told us that they had difficulty fitting into hats or were teased about their head size during childhood.
Heated, Humidified High-Flow Nasal Cannula Therapy: Yet Another Way to Deliver Continuous Positive Airway Pressure?: In Reply
Zuzanna Kubicka

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