analyzed by a sleep medicine physician. We have acknowledged the limitations of portable monitoring and the steps we took to minimize their potential impact on the study findings, which we do not believe is significant. We agree that well-designed, longitudinal studies are required to further evaluate the relationship between kidney function and the development of sleep apnea and nocturnal hypoxia.

Davido D. M. Nicholl, BHS; Sofia B. Ahmed, MD; Andrea H. S. Loewen, MD; Brenda R. Hemmelgarn, MD, PhD; Darlene Y. Sola, RN; Jaime M. Beecroft, MSc; Tanvir C. Turin, MBBS, PhD; Patrick J. Hanly, MD; Calgary, AB, Canada

Affiliations: From the Department of Medicine (Mr Nicholl; Drs Ahmed, Loewen, Hemmelgarn, Turin, and Hanly; and Ms Sola), Faculty of Medicine, and Sleep Centre (Drs Loewen and Hanly and Mr Beecroft), Foothills Medical Centre, University of Calgary.

Financial/nonfinancial disclosures: The authors have reported to CHEST that no potential conflicts of interest exist with any companies/organizations whose products or services may be discussed in this article.

Correspondence to: Patrick J. Hanly, MD, 1421 Health Sciences Centre, 3330 Hospital Dr NW, Calgary, AB, T2N 4Z5, Canada; e-mail: phanly@ucalgary.ca

© 2012 American College of Chest Physicians. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians. See online for more details.

DOI: 10.1378/chest.12-1482

REFERENCES


Radiation Dose for Pediatric Patients With Cystic Fibrosis

A Continuous Adjustment Process and Remaining Concern

To the Editor:

There is growing concern that CT scanning in children may be associated with a small excess risk of malignancy, which remains difficult to prove because there are few robust data to support the hypothesis. It is vital to remember that CT scans are performed to answer a clinical question posed to help patients through their diagnostic and therapeutic pathway; that is, a CT scan must be justified before it is performed. Subsequently, radiologists must optimize the CT scan so that the images are obtained at the lowest possible radiation dose and of suitable quality for making the relevant diagnoses. Additionally, an awareness of cumulative effective dose is important, especially in children with chronic disorders. Therefore, in an issue of CHEST (June 2012), O’Connell et al investigated a timely and important topic, namely the trend in cumulative effective dose in cystic fibrosis (CF) radiologic imaging over the past 17 years.

Unfortunately, the authors did not optimize their imaging protocols and kept the radiation dose per examination constant, whereas most CF centers have adopted low-dose imaging protocols and systematically lowered the dose during the past 17 years. Therefore, the study must not be regarded as normal practice within most dedicated centers. It may well be that in most centers, the trend in cumulative dose remained constant (or even reduced) as the dose per examination decreased, given technical advances and increased awareness. Additionally, O’Connell et al did not adopt pediatric CT scanning protocols that were published many years ago. The dose per CT scan examination used in their center was up to 25.5 times more than what is regarded as state of the art for many years now. We urge centers caring for pediatric patients with CF to pay close attention to imaging protocols with respect to the radiation dose administered. Apparently, centers apply up to 25.5 times higher doses than what is in our opinion, necessary for diagnosis.

In conclusion, imaging protocols in CF need continuous adjustment. Centers caring for children with CF should adhere to state-of-the-art imaging acquisition protocols. Because O’Connell et al did not apply these principles in their study, their findings are not applicable to most pediatric CF centers, and it remains uncertain whether cumulative effective dose increased for patients with CF.

Pin A. de Jong, MD, PhD
Utrecht, The Netherlands
Catherine M. Owens, MD, PhD
London, England

Affiliations: From the Radiology Department (Dr de Jong), University Medical Center Utrecht, and Radiology Department (Dr Owens), Great Ormond Street Hospital for Children.

Financial/nonfinancial disclosures: The authors have reported to CHEST that no potential conflicts of interest exist with any companies/organizations whose products or services may be discussed in this article.

Correspondence to: Pin A. de Jong, MD, PhD, Radiology Department, University Medical Center Utrecht, Heidberghglaan 100, Utrecht, 3584 CX, The Netherlands; e-mail: pindejong@gmail.com

© 2012 American College of Chest Physicians. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians. See online for more details.

DOI: 10.1378/chest.12-1433

REFERENCES

