

Calendar

Pediatric Grand Rounds

Wednesdays, 9:15 to
10:30 a.m., Room 6500,
University Hospital, Syracuse

January 10

“Human Papilloma Virus: Disease, Vaccine and the Future”

Leonard B. Weiner, MD,
Professor and Vice-Chair of
Pediatrics, Director, Division
of Pediatric Infectious
Diseases, SUNY Upstate
Medical University College
of Medicine

January 17

“Automatic Word Processing: A New Forum for Hypnotic Expression”

Ran Anbar, MD, Professor
of Pediatrics, Director of the
Division of Pediatric
Pulmonary Medicine, SUNY
Upstate Medical University
College of Medicine

January 24

“Drinking Future Kool-Aid: A Byte of Technology To Come.”

Neal Seidberg, MD,
Assistant Professor, Division
of Pediatric Critical Care
Medicine, SUNY Upstate
Medical University College
of Medicine

January 31

“Pediatric Palliative Care — It is about living not dying”

Irene Cherrick, MD,
Associate Professor, Division
of Pediatric Hematology/
Oncology, SUNY Upstate
Medical University College
of Medicine

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Upstate KidStuff

Winter 2007

A Newsletter for Physicians and other Health Care Providers
Interested in Children's Health

FROM THE CHAIR

As a drive up Adams Street will clearly show, construction on the Golisano Children's Hospital is well underway. Luckily, heavy snows have not yet reared their head in Syracuse, so the project is moving along nicely!

This issue of *KidStuff* features two aspects of our growing pulmonology program. These two range from the ultrasophisticated to something a child can do at home.

Zafer Soultan, MD, joined our pulmonology faculty about two years ago, coming to us from New York City. Zafer has established our growing flexible bronchoscopy program, based in the Pietrefesa Center for Children's Surgery. His article describes some common office complaints, each of which had a bit of a “twist” which led to bronchoscopy and a diagnosis.

Ran Anbar, MD, director of our pulmonology program, came to Syracuse thirteen years ago after training at the Massachusetts General Hospital in Boston. Among Ran's many talents is a facility for the practice and teaching of hypnosis. One might wonder how a pulmonologist

wound up practicing hypnosis. It turns out that a number of childhood respiratory complaints, such as chronic cough and vocal cord dysfunction, have a functional basis. Many such children are subjected to multiple tests and polypharmacy in an attempt to correct their problem. Ran has found that a number of these children can be “cured” by a brief intervention in which he teaches self-hypnosis. His expertise in hypnosis has garnered him referrals from throughout the United States for children with, in particular, chronic “habit” cough. Most recently, a family flew to Syracuse from Oregon to have Ran work with their child, who had failed multiple attempts at curing a habit cough. The intervention worked. Ran has authored articles and reviews on this subject, and frequently runs workshops on hypnosis for health professionals around the world.

So, whether it is a habit cough or a double aortic arch, our specialists stand ready to help you and your children in any way we can!

*Thomas R. Welch, MD,
Professor and Chair
Department of Pediatrics*

A “Bad Habit”

A neurologically intact 9-year-old presented to our Pediatric Pulmonary Center with a complaint of coughing whenever he ate, which he had done since he was an infant. The patient tended to cough more loudly during meals at home

than at school. Otherwise, he did not cough, wheeze, or develop shortness of breath. He did not choke, or complain of regurgitation or heartburn. He had a history of gastroesophageal reflux, for which he was treated when he was 3 years

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Habit Cough —continued from p.1

old. His physical examination and pulmonary function testing were normal.

The differential diagnosis included aspiration as a result of dyscoordinated swallowing, tracheoesophageal (TE) fistula, and gastroesophageal reflux. But if the problem were purely physiological, why did the patient cough more at home than at school? Was he keeping his cough quieter at school for social reasons? Or did he have a habit cough?

This patient could have been referred for a chest x-ray and an upper GI study, including insertion of a nasogastric tube in order that barium could be infused at high pressure, which often is necessary to make a diagnosis of TE fistula. However, the patient first was taught self-hypnosis

techniques, which are known to resolve habit cough. After a 10-minute hypnosis session, the cough did not recur, and therefore no diagnostic studies were required.

The patient's cough may have been triggered by gastroesophageal reflux in early childhood. Once the reflux resolved, as a result of therapy or maturation, the child's cough with eating likely persisted as a habit.

In conclusion, typically habit cough occurs as a loud, disruptive cough that resolves while patients are asleep. Nonetheless, clinicians should keep in mind atypical presentations of this condition, as demonstrated in this case.

*Ran Anbar, MD
Director, Division of Pediatric Pulmonary Medicine*

**Pediatric Grand
 Rounds**

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February 7

T.B.A.

February 14

T.B.A.

February 21

**“HIV Global and Domestic
 perinatal Transmission,
 Strategies for Interruption
 and Early Diagnosis”**

Diana Wara, MD,
 Department of Pediatrics,
 University of San Francisco
 School of Medicine

February 28

T.B.A.

Mark your Calendars:

2007 Pediatric Teaching Day

Wednesday, June 6, 2007

OnCenter Convention
 Center, Syracuse

“Facing Child Abuse”

SUNY Upstate Medical University is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

SUNY Upstate Medical University designates this continuing medical education activity for a maximum of 1 category 1 credit toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

Three Children with Noisy Breathing

“Noisy breathing” is a common problem in children, and the noise is generated from a narrow and vibrating structure in the airway.

There are different forms of noisy breathing: *Musical hiss* sounds much like the noise produced in normal subjects at increased rate of ventilation. *Wheezing* is musical and usually polyphonic, and occurs during expiration and sometimes during inspiration. *Stridor* is a very loud inspiratory noise originating from the extrathoracic airway. *Bubbling and crackling* indicate the presence of secretions in the airway and the alveoli, and the tactile perception may contribute to the impression of a *rattly chest* in these patients.

The most common cause of noisy breathing in children of all age groups is nasopharyngeal obstruction due to infections or allergies. Bronchiolitis, asthma and infectious or spasmodic croup are common etiologies of noisy breathing in older infants and toddlers. Asthma is a leading cause in older children.

Establishing the cause of noisy breathing is made by obtaining a history, inspection of the nasal passageways, examination of the oropharynx, and

auscultation of the neck and thorax. When these do not establish a diagnosis, or if the presentation is unusual, flexible bronchoscopy is the procedure of choice. Early onset of the noisy breathing, poor response to therapies, and atypical croup are some of the indications for bronchoscopy.

We also use flexible bronchoscopy to assess atelectasis, recurrent pneumonia, persistent infiltrates, hemoptysis, chronic unexplained cough, and to examine the airways of patients with a tracheostomy. If a foreign body is suspected, the procedure of choice is *rigid* bronchoscopy by an otolaryngologist, because the flexible bronchoscope is too small to pass the instruments required for foreign body removal.

We perform approximately 120 flexible bronchoscopies each year at University Hospital's Center for Children's Surgery. The procedure is performed by a pediatric pulmonologist on an outpatient basis, while the child is sedated and monitored by a pediatric anesthesiologist.

I have selected a few of the children who were referred to our service with noisy breathing in order to highlight issues that can arise with this presentation.

Case 1:

History: A 14-month-old girl presented with occasional *stridor* that was heard since the first few days of her life. She had a history of recurrent exacerbations of stridor and cough, which were attributed to “croup” and “asthma.”

Unusual features: *Croup and asthma do not present during the neonatal period.* Laryngomalacia might have been suspected if she were younger, but most children with this diagnosis outgrow their symptom by one year of age. Viral laryngotracheobronchitis typically first presents between 3-6 months of age.

Bronchoscopy: She was found to have significant narrowing of the distal trachea (picture 1), which can be compared to picture 2 of a normal trachea. Her chest CT scan revealed a double aortic arch creating a vascular ring. She underwent division and ligation of the non-dominant arch by our pediatric cardiothoracic surgeon.



Picture 1



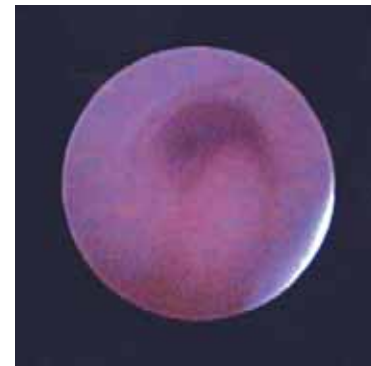
Picture 2

Case 2:

History: A 4-month-old boy presented with *wheezing* that was heard since the first few days of his life. He developed a cough that lasted for 2 months prior to presentation. He was diagnosed with “colds” and asthma, and he was treated with inhaled corticosteroids and bronchodilators with no relief.

Unusual features: *Asthma does not present during the neonatal period,* and the wheezing in this patient was not reversible with therapies.

Bronchoscopy: He was shown to have narrowing, slit-like, of the distal trachea (picture 3). A chest CT showed that the narrowing was due to circumflex aorta (right arch and left descending aorta) and an aberrant left subclavian artery, with a ring likely formed by the ligamentum arteriosum. He will undergo ligation of the ligamentum arteriosum.



Picture 3

Case 3:

History: A 17-month-old girl presented with *harsh, barking cough* since the first few days of her life. She developed numerous exacerbations of barking cough associated with *stridor*. She was diagnosed with asthma and croup, and the treatments provided partial relief.

Unusual features: *The early onset of croup and the recurrence of the episodes are atypical of infectious or spasmodic croup.* Spasmodic croup is allergic and the allergy assessment of this patient was unrevealing. Her cough was chronic, barking and it did not improve with asthma therapies.

Bronchoscopy: She had tracheomalacia as shown in picture 4. Normally, the cartilage extends for about 320 degrees. In patients with tracheomalacia, the membranous portion of the trachea occupies 40-50% of the circumference, and the trachea shape is thus more ovoid than normal, and the membranous portion is much more mobile.

Tracheomalacia can be suspected on clinical evaluation in children with a chronic, harsh, barking cough, or with central wheeze that is poorly responsive to therapy. Stridor occurs when tracheomalacia affects proximal trachea.

The natural history of congenital tracheomalacia is of slow improvement with age and treating the exacerbating illnesses like asthma or infections is usually sufficient. CPAP is applied when there is poor gas exchange. Aortopexy or placing stents may be warranted in some patients.



Picture 4

Case 4:

History: A 15-month-old boy presented with sudden onset of cough and *wheezing*. The mother described the sound to be like “a cat's purr.” He vomited a couple of times prior to start of his wheezing. An upper respiratory infection did not precede his symptoms. His chest x-ray revealed left upper lobe atelectasis.

His cough and left upper lobe atelectasis improved with chest physiotherapy and bronchodilators. However, the wheezing persisted for a month despite treatments with two bursts of prednisone and a month of an inhaled corticosteroid and bronchodilators.

Unusual features: *The sudden onset of wheezing, and the lack of improvement with asthma therapies are not typical.* He had no consistent history of asthma that is of chronic, recurrent and reversible episodes of wheezing and he had no family history of asthma or allergies. His wheezing was monophonic, which means it is likely to be originating from one narrow structure.

Bronchoscopy: This revealed a foreign body lodged in his left main stem bronchus. It was a piece of a plant that is shown in picture 5. The foreign body was removed by utilizing a rigid bronchoscope that was performed by an otolaryngologist who was available at the time of the flexible bronchoscopy.

For a consultation with a pediatric pulmonologist regarding possible bronchoscopy, call MD Direct at 315-464-4842 (local) or 800-544-1605 (toll free).



Picture 5