



DOCTOR'S DIGEST

A MONTHLY NEWSLETTER FOR ST. LOUIS CHILDREN'S HOSPITAL
ATTENDING AND REFERRING MEDICAL STAFFS

JAN/FEB 2017

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[CLINICAL FOCUS] | OSTEOSARCOMA IN A 10-YEAR-OLD: SAVING WILL'S ARM

Ten-year-old Will Bartold plays roller and street hockey. When he started complaining about his arm hurting and a lump formed in the area of his left proximal humerus, his parents thought it was because of the rough-and-tumble nature of the game he loves. But then the lump began to grow and the pain increased.

"As soon as our pediatrician, Dr. Alla Dorfman, felt Will's arm, she said she wanted an image taken immediately," says Will's mom, Sheri Bartold. "We went to a local diagnostic imaging center, where they usually tell you the results right away. This time, the technician called me back and told me Dr. Dorfman was on the phone for me. The first thing she said was, 'I love you my darling,' and I knew this was something serious. She told me there was a mass, and we needed to see an orthopaedic surgeon at Children's Hospital."

That's where Washington University physician Terra Blatnik, MD, pediatric orthopaedic surgeon at St. Louis Children's Hospital, confirmed the diagnosis for the Bartolds: Will had osteosarcoma. The Bartolds were referred to Regis O'Keefe, MD, PhD, the Fred C. Reynolds Professor of Orthopaedic Surgery and chair of the department of orthopaedic surgery at Washington University School of Medicine. Dr. O'Keefe is an expert in treating osteosarcomas in both children and adults, a level of knowledge needed to treat Will's complex case.

THE GOOD NEWS AND THE BAD

"St. Louis Children's Hospital is particularly suited for treating children with cancers of the bone—osteosarcoma and Ewing's sarcoma—because of the expertise that exists beyond orthopaedic surgery," says Dr. O'Keefe. "For example, Will's treatment called upon the skills of vascular surgery and pediatric oncology in order to achieve the goal we have for all of these patients; namely, preserving their limbs and function, and thus setting them on a path for productive lives after experiencing a potentially debilitating disease early in their lives."

Osteosarcoma's stealthy nature means tumor cells not only attack bone but also metastasize mainly to the lungs, where they are initially hard to detect. For that reason, the established protocol is to begin treatment with 8-12 weeks of chemotherapy prior to surgically removing the primary tumor. David Wilson, MD, PhD, Washington University pediatric oncologist at Siteman Kids at St. Louis Children's Hospital, oversaw Will's chemotherapy treatment.

"The chemotherapy is helpful in killing the primary tumor cells, but it is most useful in killing the cells that have metastasized to the lungs," explains Dr. O'Keefe. "Prior to the development of chemotherapy, the treatment for these children was amputation at the site of the bone cancer. Despite removing that primary tumor, however, 90 percent of patients died because of the micrometastases that had already traveled to the lungs."

Today, how well an individual patient's primary tumor reacts to the chemotherapy indicates how well cancer cells in the lung are being killed. For instance, if 40 percent of cells are destroyed at the local site, 40 percent are being killed in the lungs.

The good news for Will was that the chemotherapy



Will Bartold

continued on next page

SHARE YOUR IDEAS

Should you have ideas or suggestions you would like brought before the Children's Medical Executive Committee (CMEC), contact one of your CMEC private physician representatives:

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DOCTOR'S DIGEST

Published for the attending and referring medical staffs of St. Louis Children's Hospital.

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SAVING WILL'S ARM continued from page 1

killed 100 percent of the tumor cells at his primary site, and that meant an excellent prognosis for his recovery.

The bad news was that his tumor was spreading toward the growth plate in his shoulder.

A DELICATE, COMPLEX SURGERY

"In addition to being extremely close to the growth plate, the tumor was near key nerves and structures that would determine how much use Will would have of his arm," says Dr. O'Keefe.

The surgery involved precise, delicate cuts in an area with just millimeters between the tumor and growth plate. A 12-15 centimeter section of bone in Will's proximal humerus was removed, which meant that the small part of the remaining proximal humerus, the growth plate and shoulder joint were separated from the distal part of the arm bone by a large gap.

"The solution to this surgical problem is another illustration of why these complex cases can only be performed at facilities like St. Louis Children's Hospital," says Dr. O'Keefe. "Microvascular surgeons Martin Boyer and Daniel Osei removed Will's left fibula along with its blood supply and placed the bone in the gap that existed in Will's arm. They then connected the microscopic blood vessels from the fibula to those of the proximal humerus and distal arm bone."

The critical nature of the surgery is illustrated by what could have been the reality for Will. "If we hadn't been able to save the growth plate, we would have had to also remove the entire proximal humerus. Will's arm would have stopped growing, and he wouldn't have a shoulder joint," says Dr. O'Keefe. "The result could have been a short extremity that he may have been able to move five to 10 degrees forward and laterally."

Dr. O'Keefe notes that although removing Will's fibula meant an additional surgery—"borrowing from one place to meet the desperate need in another"—the surgeons knew the functional problems Will may experience in his leg likely would be minimal. And according to Sheri Bartold, that has been the case.

"At first when they suggested using the fibula, our concern sort of shifted from Will's arm to his leg. Would he be able to run, would it be another thing for him to overcome?" says Sheri. "Will had to wear a brace on his leg for a little while, but at this point, if you didn't see the scar on his leg, you



Will Bartold

wouldn't notice anything different about his walk or how he runs."

CONTINUING CHEMOTHERAPY

Less than a month following his surgery, Will again began undergoing chemotherapy treatments to ensure destruction of any lingering tumor cells. Once Will's eight cycles of adjuvant chemotherapy are completed, he will be approaching the one-year anniversary of his initial diagnosis.


"Because patients with bone cancers are in treatment for a long time, the whole care team needs to take a family-centered approach that provides education and support to the patients and their families," says Dr. O'Keefe.

Will also benefited from the loving support of his parents, Sheri and Mike, and older sister Morgan. "Will does get overwhelmed sometimes, and he takes medication for that. His appetite is not what it should be, and he has trouble sleeping. But his attitude is that this isn't going to get him down," says Sheri. "And for us, we developed such faith in everyone involved in Will's care. We literally put our son's future in their hands, and we are so grateful for their skill and compassion."

A PROMISING FUTURE

Only 10 percent of osteosarcomas recur at the primary tumor site, and at this point in his treatment, there is no evidence of metastasized tumor cells in Will's lungs. Once he completes chemotherapy, Drs. O'Keefe and Wilson will follow Will for years to come.

"All indications point to Will resuming his active participation in sports and other aspects of his life," says Dr. O'Keefe. "And that is what is so rewarding as we continue to follow these patients to maturity and see them enjoying a fulfilling life."

To speak with Dr. O'Keefe or to make an appointment, call Children's Direct at 800.678.HELP (4357). 

[CLINICAL FOCUS] | NEW NIH GUIDELINES RECOMMEND EARLY INTRODUCTION OF PEANUT-BASED FOODS

On Jan. 5, an expert panel sponsored by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), issued new clinical guidelines regarding the prevention of peanut allergy in children. The guidelines are based on groundbreaking studies conducted in recent years.

The panel issued three separate recommendations determined by the level of risk babies have for developing a peanut allergy:

- **Guideline 1** – Infants at high risk of developing peanut allergy because they already have severe eczema (requiring the use of prescription medication for their eczema), egg allergy or both: Introduce peanut-containing foods into their diets as early as 4 to 6 months. A specialist should decide how these babies are first exposed to peanuts based on the results of peanut skin testing and/or peanut-specific IgE.
- **Guideline 2** – Infants with mild or moderate eczema: Introduce peanut-containing foods into their diets at home around 6 months of age. Peanut testing before introduction is not required for these infants.
- **Guideline 3** – Infants without eczema or any food allergy: Freely introduce peanut-containing foods into their diets at home at or after 6 months of age. Peanut testing before introduction is not required for these infants.

In all cases, infants should start on other solid foods before being introduced to peanut-containing foods to show that the infant is developmentally ready.

“In 1997, the prevalence of peanut allergies among children in this country was .4 percent. Currently, it is at more than 2 percent—a fivefold increase in the last decade,” says Washington University physician Avraham Beigelman, MD, pediatric allergy, immunology and pulmonary medicine specialist at St. Louis Children’s Hospital (SLCH). “This is likely a direct consequence of recommendations that we now know were incorrect—delaying the introduction of peanut products in an effort to prevent an allergy. In recent years, the elegantly designed LEAP study has definitively shown that the early introduction of peanut actually prevents development of an allergy.”

The landmark Learning Early About Peanut Allergy (LEAP) study was developed and conducted by Dr. Gideon Lack and his colleagues at King’s College London. The randomized clinical trial involved




640 infants deemed at high risk because they already had severe eczema, egg allergy or both. The trial results showed that regular peanut products consumption begun in infancy and continued until five years of age led to an approximately 80 percent reduction in development of peanut allergy.

“These studies have truly revolutionized how we approach prevention of peanut allergy,” says Dr. Beigelman. “By following these new recommendations, we can nearly eliminate a very severe disease.”

Dr. Beigelman highlights two important points physicians should take into consideration:

1. Since peanut consumption by infants may result in choking, they should instead be fed with either smooth peanut butter or age-appropriate peanut snacks such as Bamba. Pediatricians should instruct parents about the appropriate method of providing peanut protein to their infants.
2. Early introduction of peanut products and other solid foods should be in addition to breastfeeding rather than replacing it.

The NIAID Addendum Guidelines appeared Jan. 5 in the *Journal of Allergy and Clinical Immunology* and were co-published in the *Annals of Allergy, Asthma, and Immunology*; *Journal of Pediatric Nursing*; *Pediatric Dermatology*; *World Allergy Organization Journal*; and *Allergy, Asthma, and Clinical Immunology*.

To download related resources, including a Summary for Clinicians PDF and Summary for Parents and Caregivers PDF, visit StLouisChildrens.org/DD. 

WE'D LIKE YOUR INPUT!

To provide you with information that you find of value, please complete a short online survey about *Doctor's Digest*. Access the survey via a link at StLouisChildrens.org/DD or directly at surveymonkey.com/r/DoctorsDigestSurvey


[SLCH NEWS] | LANGUAGE ACCESS PLAN HELPS MEET PATIENTS' NEEDS

St. Louis Children’s Hospital’s Language Access Plan serves as a blueprint that includes a description of hospital resources and services provided for patients and families with limited English proficiency or who are deaf and/or hard of hearing.

This means being aware of patients and families’ language needs and providing services compliant with many federal laws and regulations.

The plan includes:

- A needs assessment
- The services provision description
- Direction for disseminating, monitoring, evaluating and updating plan components

For more information, call Eva Enoch, manager of language services, at 314.454.2579. 

[SLCH NEWS] | SCHEEL NAMED ASSOCIATE VICE CHANCELLOR FOR CLINICAL AFFAIRS AT WASHINGTON UNIVERSITY SCHOOL OF MEDICINE; WIFE JOINS PEDIATRICS



Paul J. Scheel Jr., MD

Originally published by Washington University School of Medicine

Paul J. Scheel Jr., MD, a highly regarded nephrologist and physician-leader at Johns Hopkins University School of Medicine, has been named associate vice chancellor for clinical affairs at Washington University School of Medicine in St. Louis and chief executive officer of Washington University Physicians, the school's faculty practice.


His appointment, which begins July 1, was announced by David H. Perlmutter, MD, executive vice chancellor for medical affairs and dean of the School of Medicine.

"I am delighted to welcome Paul to Washington University School of Medicine," Dr. Perlmutter said. "He is an experienced and collaborative physician-leader with strong business acumen and an impressive track record at Johns Hopkins Medicine. I am confident

that under his leadership, our faculty practice will continue on its current path of excellence as we move into the next era of rapidly changing health-care dynamics."

Dr. Scheel succeeds James P. Crane, MD, who will step down as associate vice chancellor for clinical affairs and from his position leading Washington University Physicians after more than 25 years at the helm.

In addition, Dr. Scheel's wife, Janet Scheel, MD, will join the School of Medicine's Department of Pediatrics as associate medical director of the heart failure and transplant program in the Division of Cardiology.

To learn more about the distinguished backgrounds of Dr. Paul Scheel and Dr. Janet Scheel, visit StLouisChildrens.org/DD. 



Janet Scheel, MD

[SLCH NEWS] | SLCH RECEIVES NURSING EDUCATION AWARD

In November, St. Louis Children's Hospital (SLCH) received the McIntosh Durham Employer Award from the University of Missouri – St. Louis College of Nursing.

"SLCH deserves the employer award for fostering an incredible learning environment for current nurses, future nurses, and anyone wishing to learn the most current and efficient ways to care for patients and their families," says Ericka Sanner-Stiehr, RN, PhD, assistant professor, University of Missouri – St. Louis (UMSL) College of Nursing.

"The surgeons, physicians, managers and others make working there a pleasure and are always willing to lend a hand in any way they can," she continues. "There are even stat nurses for when nurses are swamped and cannot take lunch or need help starting an IV. As a nurse, there is nowhere I would like to work more than at this innovative hospital."

"It takes everyone working together as a team to offer strong clinical experiences for students, whether they're in nursing, respiratory therapy, therapy services or medical school," says Cindy Vishy, RN, clinical education manager. "I think the fact that the nomination mentioned several roles that contribute to a positive student/employee experience speaks to the teamwork that is part of our hospital's culture."


The award is presented to a facility that has shown excellence in the following criteria:

- Sustained excellence in the environment for nursing practice, clinical education and health outcomes
- Superb clinical learning environment for students in undergraduate or graduate nursing education programs



The SLCH clinical education team includes, from left, Tina Klasing, RN; Cindy Vishy, RN, manager; and Rose Hansen, RN. Beth Hankamer, RN, is not pictured.

- Opportunities for inter-professional learning
- Expanded opportunities for student learning and career development, such as seminars, shadowing, research opportunities, externships and residencies
- Potential for ongoing contributions to UMSL College of Nursing, nursing and clinical education

The award was presented at the Annual Elizabeth McIntosh and Jerry Durham Endowed Alumni Lecture at the university. 

[FACULTY UPDATE] | PHYSICIAN PROFILE

Anne M. Connolly, MD

Pediatric Neurology Attending Physician, SLCH

Professor of Neurology and Pediatrics, WUSM

Neuromuscular fellowship:

Washington University School of Medicine

Research fellowship:

NIH Developmental Neurology Training Grant

Child neurology fellowship: St. Louis Children's Hospital (SLCH)

Neurology residency (adult): Barnes Hospital

Pediatric chief residency: SLCH

Pediatric residency: SLCH

Medical degree: Indiana University, Indianapolis

Dr. Connolly became a physician because of a brief conversation in 1978 with Rosalyn Yalow, PhD, the second American woman to be awarded the Nobel Prize in Physiology or Medicine. Having loved science from the time she was a little girl, Dr. Connolly's goal was to conduct research that would move science forward in a meaningful way. Dr. Yalow advised that the best way she could do that was to become a physician researcher. Then, during a medical school rotation in pediatric neurology, Dr. Connolly found a field that satisfied her fascination with physiology and her desire to improve the quality of children's lives.

"The things that can go well and can go wrong in the development of an infant and young child were absolutely fascinating to me. And the idea that we might be able to change some of those things that go wrong held great appeal," she says. "There are times you can intervene and improve a child's development and quality of life, give them the ability to do what most of us take for granted—smile, eat, walk, talk, laugh, dream, grow up, fall in love, get married—all of those elements that really are our own humanness. I just did not see any other field that was so compelling."

Dr. Connolly specializes in disorders that cause neuromuscular weakness in children. In particular, she has done extensive research into understanding and treating Duchenne muscular dystrophy. Dr. Connolly devoted more than 10 years to working with mouse models of neuromuscular disorders. She now conducts treatment trials and natural history studies for this group of pediatric patients.

"I also am deeply invested in promoting newborn screening so that we can treat some of these disorders earlier in life," says Dr. Connolly. "Some disorders like Duchenne's may not show up until the age of 5, but they've already caused a lot of damage in that short time. We are coming closer to developing a cure for Duchenne's, and when that happens it will be easier to show the worth of screening newborns."



Anne M. Connolly, MD


Dr. Connolly serves on the International Standard of Care Committee for treatment of children with spinal muscular atrophy and as a committee member of the Centers for Disease Control and Prevention Diagnostic Expert Group for Duchenne muscular dystrophy. She is a member of the editorial board and an associate editor for the *Journal of Child Neurology* and is an invited reviewer for a number of other journals. She is the author of more than 70 peer-reviewed publications.

Dr. Connolly has appeared on the Best Doctors in America listing for more than a decade. She has received a number of awards, among them the St. Mary's College Alumni Achievement Award, the Washington University Neurology Teacher of the Year and, most recently, a 2017 Washington University Distinguished Clinician Award.

"I am proud of my care of children and their families, and it is an honor to receive this award," she says. "As a teacher, there have been a number of fine physicians at St. Louis Children's Hospital and Washington University who have influenced me, among them Drs. Jim Keating, Mike Noetzel, Jean Thurston and Alan Pestronk."

Dr. Connolly and Charles Cashner have four children: Caitlin, an architect in Boston; Colin, an engineer; Conor, a senior at Washington University; and Cormac, a junior at Xavier University in Cincinnati.

Dr. Connolly regularly volunteers at the Muscular Dystrophy Association's summer camp and with the Washington University medical mission program in Catacamus, Honduras. She enjoys gardening, biking and sewing on a 100-year-old pedal sewing machine.

To learn more about Dr. Connolly, visit StLouisChildrens.org/DD. 

[SLCH NEWS] | ASTHMA CONTROL EDUCATION (ACE) CLASS SCHEDULE FOR 2017


St. Louis Children's Hospital's Asthma Education Committee has six Asthma Control Education (ACE) sessions scheduled in 2017.

- Saturday, April 1, 9-11 a.m., Christian Hospital NW
- Saturday, April 8, 9-11 a.m., Progress West Hospital
- Saturday, April 29, 9-11 a.m., St. Louis Children's Hospital
- Saturday, September 23, 9-11 a.m., Christian Hospital NW
- Saturday, October 7, 9-11 a.m., St. Louis Children's Hospital
- Saturday, October 14, 9-11 a.m., Progress West Hospital

The free sessions cover basic information about asthma including peak flow monitoring, action plans, triggers and environmental

controls. Attendance at the sessions is kept small, and each session is individualized to participants' personal asthma action plans.

The sessions are open to parents and caregivers of any child with asthma. Children may attend the sessions if they are five years of age or older and accompanied by at least one parent. Families may call 314.454.KIDS or 800.678.KIDS to register. Pre-registration is required. Room numbers and directions are mailed with registration confirmations.

To request ACE class schedule flyers or learn more about how ACE can help your office, contact Children's Direct at 800.678.HELP (4357). 

[RESEARCH UPDATE] | DEPRESSED CHILDREN RESPOND DIFFERENTLY TO REWARDS THAN OTHER KIDS

Brains react less robustly to success, rewards

By Jim Dryden / Washington University School of Medicine

For many children, recent holidays are often linked to presents and excitement, but when a young child doesn't seem all that enthused about getting gifts, it could be a sign that something is wrong. Measuring brain waves, researchers at Washington University School of Medicine have found that clinically depressed children don't respond to rewards the same way as other children do.

Previous research from the same group of scientists found that a reduced ability to experience joy is a key sign of clinical depression in young children. The findings in the new study could help explain the biological underpinnings of the earlier discovery.

"These findings may show us how the brain processes emotions in young children with depression," said senior investigator Joan L. Luby, MD, pediatric psychiatrist at St. Louis Children's Hospital and director of Washington University's Early Emotional Development Program. "The pleasure we derive from rewards—such as toys and gifts—motivates us to succeed and seek more rewards. Dampening the process early in development is a serious concern because it may carry over to how a person will approach rewarding tasks later in life."

The new findings are published in the December 2016 issue of the *Journal of the American Academy of Child & Adolescent Psychiatry*.

"A blunted response to reward frequently is seen in the brains of depressed adults and adolescents," said first author Andrew C. Belden, PhD, an assistant professor of child psychiatry. "In this study, we were interested in learning whether preschoolers also had that blunted response to reward, and in fact, the brains of children as young as 4 showed very similar responses. That's consistent with other findings in that many neurobehavioral aspects of depression remain consistent throughout the lifespan."

The research, involving 84 children, was conducted as part of a larger study of clinical depression in children ages three to seven. The principal investigators of that larger study, which includes therapy and functional brain scanning, are Dr. Luby and Deanna M. Barch, PhD, chair of Washington University's Department of Psychological & Brain Sciences in Arts & Sciences and the Gregory B. Couch Professor of Psychiatry at the School of Medicine.

The children wore a device that resembles a shower cap but is hooked to wires that measure electrical activity in the brain using an electroencephalogram machine (EEG). Then, the children played a computer game that involved choosing between two doors shown on the screen. Choosing one door won them points, but choosing the other resulted in a loss of points.

Researchers have tested this idea in adults and teens by allowing them to win cash. In this study, however, young children who picked the correct door enough times won a toy that they were able to pick from a basket of figures, balls and plush items they had been shown before the computer session began.

While the brains of clinically depressed children responded similarly to those of nondepressed children when points were lost, the response when the correct door was chosen was blunted.



A child viewing the device that measures electrical activity in the brain after choosing between doors on a computer screen. Choosing one door wins points while the other results in a loss of points. Washington University researchers have found that the brains of children with depression don't react as robustly to success in the game. Their blunted reward response is a marker of clinical depression. | Photo by Robert Boston


"The EEG results showed that their brains did not react as robustly from the pleasurable event of choosing the correct door on the screen," Dr. Belden said. "It was not that their brains somehow overreacted to making the wrong choice. The brains of both depressed and nondepressed children reacted the same way to making the wrong choice. The differences we observed were specific to the reward response."

Drs. Luby and Belden next plan to see whether the blunted response to reward changes after treatment.

"It may or may not normalize," said Dr. Luby, the Samuel and Mae S. Ludwig Professor of Child Psychiatry. "But we suspect the reward response will improve."

Drs. Luby and Belden said that when a very young child doesn't seem to be excited by rewards, such as toys and gifts, it may be a sign that the child is depressed or prone to depression. If the condition persists, they suggest parents talk to a pediatrician.

"There are clear risk factors," Dr. Luby explained. "Decreased ability to enjoy activities and play is a key sign. Kids who feel excessively guilty about wrongdoing and those who experience changes in sleep and appetite also may be at risk. If they're persistently sad, irritable or less motivated, those are markers that may indicate depression, even in kids as young as 3 or 4, and we would recommend that parents get them evaluated."

For more information about the study, which is still recruiting preschool participants, call 314.286.1888 or email pcited@psychiatry.wustl.edu. For research references and disclosures, visit StLouisChildrens.org/DD. 

[CASE STUDY] | "TELL ME AGAIN"

The following case study was used by Andrew J. White, MD, the James P. Keating, MD Professor of Pediatrics and division director of pediatric rheumatology, Washington University School of Medicine, and director of the St. Louis Children's Pediatric Residency Program, as part of the "Patient of the Week" (POW) series. Many of the POW case studies cover uncommon illnesses, or common illnesses with unusual presentations. If you would like to be added to the POW email distribution, send an email to white@kids.wustl.edu.

HPI: 19-month-old boy with asthma presents with **fever** and **rapid breathing**.

He felt warm the past six days (did not take temp) and for the past three days has had rapid breathing, wheezing and grunting. Mom gave nebulized albuterol, which helped initially but no longer helps. He also has clear rhinorrhea, NBNB emesis x1. Denies cough. Denies diarrhea. Decreased PO intake of food but good PO intake of liquid and good UOP. In ED he was febrile with RR 70s. He was given acetaminophen and once he defervesced, he improved.

CXR showed pneumonia. He was started on ampicillin, IV fluids and admitted to the floor.

PMH:

1. Behind on immunizations. Up to date as of 9 months.
2. Asthma. Home nebulizer.

Exam:

Vital signs 37.1, 131, 40, 103/83, 98 percent

Comfortable and in no distress. Skin warm and dry, no rash. Posterior pharynx clear, mucous membranes moist. No tonsillar hypertrophy. Neck supple, no lymphadenopathy. Crackles and diminished breath sounds on right side, normal breath sounds on left side. No wheeze, no stridor. Soft, non-distended abdomen, non-tender, no hepatosplenomegaly, no masses, normoactive bowel sounds. Spine straight with no deformities visualized. No clubbing, cyanosis or edema. CNs normal, moves all limbs.

CXR:

Admitting Assessment:

"19-month-old with six days

fever and three days respiratory symptoms—wheeze, grunting, shortness of breath, no cough. Symptoms initially responsive to albuterol, but now with little response. Most likely diagnosis is **community-acquired pneumonia**. Differential also includes aspiration pneumonia and foreign body aspiration. Patient currently appears well when afebrile, worse appearing when temperature rises. No supplemental O2 currently."

Plan:

1. Ampicillin IV
2. Surgery consult for chest tube placement

A Diagnostic Clue: When the teaching attending was observing a medical student perform an H & P on this child, a clue was uncovered. Mom mentioned they had moved here seven months ago. "From where?" "A small town in rural Texas." "Why?" "Dad is in and out of prison."

Additional diagnostic consideration: **Tuberculosis**

Course: As the patient was about to head to the operating room, the team moved quickly to notify infectious diseases and the operating room and the surgeons, who were able to successfully perform the procedure (chest tube) in negative pressure isolation and with appropriate protective gear (N95 masks), preventing what would have been exposure of many individuals to TB.


Results: PPD was positive at 18 x 20 mm. Antituberculous therapy was initiated, chest tube was removed after three days, and the

patient improved and was discharged home after a week.

Treatment:

1. Isoniazid, Ethambutol, Rifampin, Pyrazinamide and B6 for two months, followed by two drug therapy for four months.
2. Notification of Department of Health.

Lessons:

1. Think TB.
2. Retelling of the story, as is done in teaching hospitals, sometimes leads to new clues, and shouldn't be viewed as onerous to family/patient/physician... instead, it can be **useful**. 



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CONTINUING EDUCATION

Early Bird Rounds

(Fridays, 8 a.m., St. Louis Children's Hospital Executive Boardroom, 3S-36, or online at StLouisChildrens.org/Med_Ed.
For information about the upcoming Early Bird Rounds presenters and topics, go to StLouisChildrens.org/Med_Ed.

Specialty Care Speaker Series

Last Tuesday of every month, St. Louis Children's Hospital Specialty Care Center, Mason Road & I-64; 5:30 p.m. complimentary light meal, 6 p.m. one-hour presentation begins. Registration is required. Visit StLouisChildrens.org/Med_Ed to register online.

Feb. 28 – Rachel Orscheln, MD, Infectious Diseases

Mar. 28 – Brian Kelly, MD, Orthopedic Surgery/Spine

Apr. 25 – Katherine Dunsky, MD, Ear/Nose/Throat

May 30 – Aarti Dalal, MD, Cardiology

June 27 – Carmen Halabi, MD, Nephrology

July 25 – Fred Huang, MD, Hematology

Aug. 29 – Kamlesh Patel, MD, Plastic Surgery

Oct. 24 – Suzanne Thompson, PhD, Psychology

Nov. 28 – Lori Holtz, MD, Gastroenterology

Upcoming Conferences

• **Spring 2017 Clinical Pediatric Update**, Friday, Mar. 31, 7:30 a.m.-4:30 p.m., Marriott West-St. Louis, 660 Maryville Centre Drive, St. Louis, MO 63141

• **Pediatric Telephone Triage**, Wednesday, April 12, St. Louis, MO

• **Pediatric Psychiatry for the Primary Care Provider**, Friday, May 5, St. Louis, MO

• **Pediatric Coding**, Friday, July 14, St. Louis, MO

For additional information about these conferences, go to StLouisChildrens.org/Med_Ed.

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