"The great pediatric radiologists know that caring for children is profoundly good for the soul." - Richard Gunderman, Lure of Pediatric Radiology, AJR2001

Performing an upper GI contrast study, doing ultrasound, discussing radiation with parents or even just walking in the corridor of a pediatric radiology department is an experience in itself. The experiences may be recurring or sometimes unique. The experiences that are profoundly good for the soul provide an opportunity to be a better human being. We are bringing such pediatric radiology moments in the form of vignettes under the series - **'Tales of a Pediatric Radiologist'**.

Where to find: Is Ped Rad for Me webpage (https://bit.ly/2Z2dH6m) and links shared on Twitter and Facebook

Frequency: New story uploaded bi-monthly - on Fridays

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What is your favorite food?

It was going to be a busy day in fluoroscopy. The list was full. Surgeons were running their clinics. We were expected to accommodate some add on cases.

I enter the fluoroscopy room, greet the mother and turn towards Max. A 6-year-old wearing a white hospital gown on his body, a bit of anxiety on his face and a hint of curiosity in his eyes. He is sitting at the edge of the fluoroscopy table with his legs hanging, his mother standing beside him.

"Max, what drink did you choose?" I ask.

"Chocolate" he answered with a soft, little voice.

"Excellent choice! And that is the most popular choice!" I said.



To this, Max's mother tries to explain to him, "Max, you are lucky that you get to choose the flavor of the drink here. When daddy had the same test done at another hospital, they made him drink the chalky barium".

That is indeed true. As a pediatric hospital we offer flavors to be added to the barium for our gastrointestinal contrast tests. Our little customers have a variety of flavors to choose from. They have chocolate, they have orange, they have root beer and they have Kool-Aid. Chocolate is the most popular flavor!

After positioning Max in right lateral position, his mother at the head end of the table, fluoroscopy screen obliquely in front of me, I collimate for the lateral view of esophagus. I look at Gillian, our experienced technologist standing at the head end with Max's mother, and declare "Max can drink now".

"Max, big gulps buddy and keep drinking with this straw till we tell you to stop" encourages Gillian.

After documenting lateral views of the esophagus I announce "We can take a break now from drinking!" I move my camera down and collimate for the stomach.

I again look at Gillian. That look interacts with her experience and she swings into action.

"Max, what is your favorite food?" she asks. The mother's expression reveals the question was unexpected. Judging that, Gillian quickly explains to her, "Mom, we are now waiting for Max's stomach to empty and for all of the drink to move into the intestine. When you think of food, the stomach empties faster".

The mother seems relieved and also amazed to have learned that the mere thought of food makes your bowel move. She now takes the onus on herself to empty out that stomach of Max's! "Max, you like pizza, right?"

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Max answers "Yes".
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"What do you put on your pizza?" Gillian adds.

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"Cheese"
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"Lots of cheese?".
"Yes"
"Pepperoni?"
"Yes"
"Chicken?"
"Kind of yeah"
"Do you like pizza made by mom or that you get from out?"
"My mom makes it"

Then conversation moves toward ice-creams and all its flavors, from: vanilla, chocolate, strawberry, oreo, and sundae to bubble-gum. In those with stubborn stomachs, resolved not to open, there would be a verbal expedition through the food culture of the family. What kind of pasta do they like? What goes in their soup? And a small debate on 'who makes the best French fries?' could often be heard.

Sometimes, we do get some little healthy eaters who like carrots, apples and broccoli. And yes, those carrots and apples do open their stomachs to empty. We get some dalrice eaters, biryani eaters, pad thai lovers and fish-and-chip relishers too.

Occasionally, some cooking tips get exchanged between Gillian and the mothers.

Barium contrast studies were, for many years, my main source of learning about the foods people eat here. My window to peek into the food culture of Toronto.

Max's stomach opened to strawberry ice-cream. We quickly moved him onto his back and took pictures of the most coveted 'D-J flexure'. Catching that D-J flexure with the first bolus is like winning a medal. Every time I catch it, I get the same feeling that I got for the first time many years ago. After taking Max on a virtual journey of food, we make him roll on his sides a few times to illicit reflux.

The exam ends. Max gives a high-five and gets a 'good job!'.

Later in the afternoon, finding a small window of opportunity in between the cases, I head to the cafeteria to grab some food. In the adjacent queue I see Max and his mother, holding their food boxes waiting to pay.

I wave at Max and ask "Hey buddy, finally time for some real food hunh?"

Max points a finger at the food box I am holding and asks "Is it your favorite food?"

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Where does it hurt the most? Can you point to it with one finger?

The corridor outside the ultrasound area was busy that morning where a few parents with their kids, our patients, were waiting for their exams. One mother was standing by the side of a stroller, entertaining a baby in her hand. Another 3-year-old was running around the corridor, giving curious looks to people passing by.



I had passed through the room leading to our work stations where the ultrasound technologists were

preparing to pick up their patients for scanning. Our manager was in conversation on phone with a pediatric resident deciding whether a scan was indicated or not.

I was just sitting down to cover ultrasound that morning and had signed onto my workstation.

"Can I show you a case?" asked the ultrasound technologist from behind with a radiology resident in her company.

"Of course. What is it?" I answered, turning around.

"This is a repeat scan for an emergency room patient. This 13-year-old has right lower and upper quadrant pain, and they want to rule out appendicitis," said the technologist. "The overnight scan was normal, but she is still symptomatic... but she is chubby, and it's hard to see things."

After quickly looking at the images, I turn towards the resident who was patiently observing and listening. To bring him into the conversation, I asked, "Did you scan this child? What did you find?"

"Yes, I did, but I could not see much," he replied.

I had seen increased echogenicity of the fat on some of the right upper quadrant images and decided to scan the child myself. I also saw an opportunity to teach this resident some important etiquette on abdominal ultrasound--something that had helped me on numerous occasions and had actually helped me win the confidence of my fellowship director as a fellow.

I was only three months into my pediatric radiology fellowship. I had crossed half the world to do my training in a totally different environment and culture. I was not that expressive initially, and I had not yet gained the confidence of my attending radiologists.

One morning, I was reviewing my overnight on-call cases with my attending, who was also our fellowship program director. I was very excited to show him one particular case that I had scanned at 2:00 AM. That case made me feel good, giving me the joy of finding something new.

Finally, the case came up for review.

After narrating the history and describing the findings, I said, "it is a tip appendicitis with perforation forming a small abscess in the *left* upper quadrant". This elicited a quick response from the attending who turned his head towards me.

"Left upper quadrant?" he asked dubiously, his look implying that I had gone mad, but also wondering why I appeared so confident today." He regained control of his emotions then asked me, "Are you sure?"

I nodded my head in affirmation, "Yes."

"How did you find an abscess in the *left* upper quadrant from appendicitis?"

"I asked the child to point with one finger to where it hurts the most," I answered confidently.

I walked him through the images where I had traced the entire 'longest appendix I had ever seen in my life'. It extended from the cecum in the right lower quadrant, crossing the midline and then extending superiorly with its tip in the left upper quadrant. This appendix, like me, had also crossed half the world.

He was convinced of the findings, but I could see he was still hesitating and doubtful. That afternoon he called the surgeon who had operated on the child in the morning and found the findings were correct. Needless to say, the journey of that longest appendix had complimented my long journey and put more confidence in me by my fellowship director.

Coming back to the case today, I walk down the ultrasound hallway with my mini entourage of the technologist and the radiology resident. I heard the sounds of a newborn baby crying from one ultrasound room and "*swiper does the swiping, swiper does the swiping, du du du Dora*!" from another.

After introducing myself, I take the probe in my hand and ask the patient, "Ruby, it may be hurting everywhere in your tummy but could you point out where it hurts the most? ... Only with one finger!"

Most children point to their umbilicus. But when it is away from it, the chances of finding the abnormality increase. Ruby puts her finger in the right upper quadrant.

I scan that area and find an ill-defined area of echogenic fat without any flow right underneath the abdominal wall. I turn towards the resident and explain to him, "This is how an omental infarct looks."

While coming out of the ultrasound room, I ask the resident, "What was the takeaway for you in this case?"

"Where does it hurt most? Can you point to it with one finger?" he replies while pointing a finger at me. He sees the satisfaction and gratification in my eyes!

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Unfortunately, she has a mass in her liver.

The Ultrasound Department was busy as usual. Technologists were coming one by one to show their cases. They held their papers with patient names on the top and their hand-written findings and measurements below.

After signing out a report, I ask the next technologist to come present his case. While sitting on the adjacent chair, he hands me the paperwork.



He states the history, "This 16-year-old girl had liver mass a long time ago and now has intermittent abdominal pain".

I readily recognize the patient's name Lily Suarez. A name with which I was very familiar. The name I always look forward to seeing over many years.

While I open the exam and start looking at the images, I vividly remember that incident – the ultrasound I had performed 13 years ago as a first year pediatric radiology fellow on call, on the then 3-year-old Lily.

It was 3:00 AM in the morning.

Lily had presented to our emergency department with acute abdominal pain for the last few days. After waiting for hours in our emergency department, she finally got her chance to get an abdominal ultrasound to rule out any acute abnormality.

There was no ultrasound technologist coverage after 5:00 PM. Radiology residents and fellows were responsible for performing ultrasounds after hours.

Unfortunately, I found a large 8 x 10 cm vascular mass in Lily's liver. After completing the scan, I told Lily's mother that I would send the report to the emergency department shortly. Worried about Lily, she asked, "Is everything ok?"

"There are some findings. The emergency doctor will explain them to you," I replied.

"Could you tell me something? Is there anything to worry about?" she asked.

Back in India, during my residency, we did disclose the findings to the patients frequently after the radiology tests. I was not that used to the new system here where the physician who ordered the imaging studies disclosed such significant findings after having completed all tests and consultations.

I was in a difficult spot. I wasn't sure whether to tell here or not nor how to tell her. Suddenly, the words came out of my mouth "Unfortunately, she has a mass in her liver".

The mother broke down instantaneously and started crying loudly. Looking at her mother, Lily also started crying. I had a situation on my hands! I started consoling them.

"I am sorry, please do not cry."

"We don't know if this one is simple or bad. We will know after the work up and other tests".

After five minutes of talking and reassuring them some more, Lily and her mother recover. I escort them myself to the emergency room that was nearby.

That night I kept thinking did I make a mistake by disclosing the results? Could I have done it differently? Was it too sudden and direct to tell her that she has a mass in her liver? I was feeling badly for Lily. A large vascular liver mass in a 3-year-old was most likely a cancer called hepatoblastoma.

Lily had her work up in the next few days including an MRI. I was involved in her MRI but did not have a chance to see Lily. To my greatest joy and relief, the biopsy came back as telangiectatic FNH, which is a benign tumor. Lily eventually had it resected by our surgeons without any complications.

Lily had ultrasound follow-ups for the next few years, but the scans did not occur when I was covering ultrasound so I never had a chance to meet her again until today.

I went through the images carefully looking at her liver, pancreas, spleen, kidneys, and bowel. I looked for any lymph nodes and free fluid. Everything was good. No abnormalities.

I walked to the ultrasound room with the technologist.

"It is such a pleasure to see you, Lily!" I said while entering. I introduced myself to Lily and her mother and reminded them of the first ultrasound scan she had 13 years ago. The mother, too, remembered the incident vividly.

We chatted for few minutes, and I said to the mother, "That day, I was hesitant to tell you the results. But today, even without you asking, I am happy to tell you that everything is normal!"

We bid our goodbyes to each other. I also bid goodbye to the feeling of guilt that I had held for many years. And today, I welcome the feelings of satisfaction and of closure, as I was extremely happy knowing the benign diagnosis!

I always carry a black bag with netted pockets on its side from an RSNA meeting with me to work. Occasionally, I put some candies and chocolates in those pockets while going home. This ensures that the door at my home was opened every day for me by my kids anticipating surprise treats. Today was a day that I would fill those pockets with surprise treats and chocolates.

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Some radiologists always get good cases!

I was signing in at the workstation for CT and checking the day's schedule of cases when I began to wonder who would be covering nearby fluoroscopy today.

I did not have to wait long to find out. His presence was felt by all whenever he was around. There was never a dull moment in the reporting area on those days. It was *extremely loud and incredibly close* with Dr. D., as we fondly called him. He had been practicing as a pediatric radiologist for 40 years. He was covering fluoroscopy today. A constant stream of visitors and a non-stop flow of impeccable stories were the order of the day. So was the recurring "Okay" in a close-to-British accent.

Whether it was as a resident, fellow, technologist, or senior radiologist, his shout of "Want to see a good case?" would make all of us stop what we were doing and run to his station. There was no particular time or frequency when you would get that call.

Later that morning, I was summoned, "Govind, want to see a good case?".

I, along with the fellow and resident working with me that day, went to his workstation. With child-like enthusiasm and 40 years of experience, he starts showing the case.

"This little one in the NICU had bilious vomiting. They did an ultrasound on him last night," he says while scrolling the images.

"Here is his SMA and SMV. They have a normal relationship, but you should not stop scanning there," he cautions.

Scrolling through more images, he comes to the interesting finding that he had already marked with big arrows. His eyes widen in excitement, "Look at that! There is almost a 360-degree twisting with a *whirlpool* in the right lower quadrant. It is a segmental volvulus!"

The resident was puzzled. "But the SMA and SMV are normal. Why is there a volvulus?"



He turns around and explains, "It is not a midgut volvulus. It is a segmental volvulus that occurs without malrotation but nonetheless causes bowel obstruction." He then goes on to explain various aspects and causes of segmental volvulus.

The resident and fellow turn to go back to their stations, but I know from past experiences that he's not done. Then comes the familiar phrase, "Many years ago..." With every case Dr. D. showed came a little story, a *companion story*. He stands up from his chair and continues, "...we had a similar case. John was the surgeon who now works in the States. We showed him a segmental volvulus, demonstrated by the whirlpool sign, with a normal SMA and SMV on ultrasound. He operated on the child as she was clinically obstructed. He found a normal SMA and SMV without any midgut volvulus and closed the abdomen. He bumped into me in the corridor later that evening and told me that he did not find any volvulus. However, the child's abdomen continued to distend in the post-operative period. Ultimately, the next day, they had to take the child back for surgery. They found a small lymphatic malformation around which the bowel had twisted resulting in the distal volvulus."

He ended the story with another of his pet phrases, "Such is the life!"

The resident who had started his rotation recently had seen some good cases with Dr. D. He thanked him for showing yet another interesting case and observed, "Some radiologists always get good cases!"

To this, Dr. D. replied, "Because they look for it!"

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What did you eat today? Wait! Don't tell me. I will tell you!

One of the methods I use to engage small kids while ultrasound scanning is to ask, "What did you eat today? Wait! Don't tell me. I will tell you!"

Then I show them the ultrasound probe and explain, "This is my special camera. This camera shows the inside of your tummy and also what you ate!" This often results in curious looks by the child at the ultrasound screen or towards their parents wondering if I am telling the truth.

After I put gel on the abdomen, also known as the 'some jelly on your belly' ritual, I start scanning and listing a few of the more common foods.

"I see some pasta here," I say, looking at the parent. If they smiled and nodded in agreement, I knew that I had hit the jackpot.

If there was no clue from anyone, either the child or parent, I would move on to the next kid favorite, "Oh, it looks like pasta, but maybe it is actually macaroni and cheese?" Then to cheese sandwich, to eggs, to bread with butter and so on. Sometimes I would win the guessing game, sometimes not.

But the truth is I could not tell what they had eaten by looking at the ultrasound except for *one food*.

Victor Ramirez was my co-fellow, and he had two daughters. One weekend when I was on call, he came to the department with 4-year-old Flavia.

"She has been complaining of intermittent abdominal pain for the last 2-3 days. I thought I would scan her and see what is happening", he says, explaining his reason for the visit on Sunday.

He takes Flavia to one of the many empty ultrasound rooms on the weekend. After a half-an-hour or so, I see Victor emerging out of the room with tears flowing from his eyes. Flavia was still inside the room.

I get up from the chair, and holding his arm, ask him, "Hey, what is the matter?"

"I see something weird in Flavia's bowel. It looks like a mass," he replies while still crying.

"Don't worry, let's have a look."

We go inside and scan Flavia again. We find an ill-defined, mixed echogenic lesion within her bowel in the left flank. It had some linear strands within it. We discuss the unusual appearance of the lesion, which did not match any typical lesions we see commonly. We discussed the possibility of worm infestation, but we did not see any 'worm-movement' on ultrasound.



Considering our next steps, I remembered Jose was on call with me that day and would be coming back soon after performing portable PICU ultrasounds. We both instantaneously had a 'let's show it to Jose' moment.

We were both aware of Jose's credentials - more than three decades of experience and his ability as an excellent technologist. Jose had received his degree as a medical doctor in South America before moving here and becoming a sonographer. Shortly after, Dr. Jose arrives, pushing the ultrasound machine topped by a paper with the name of the patient he had just scanned and his notes. We explained to him the situation we had on our hands.

We follow Dr. Jose into the room and eagerly stand behind him while he scans Flavia. After a while, he stops and asks Flavia, "My dear Flavia, what did you eat today?"

"Apples," answers Flavia.

"What else?"

"Carrots"

"Before that?"

"Some noodles."

That brings a smile to his face. Smiling, he looks at us and speaks in a loud, happy voice: "Doctoreeees, nothing to worry about! It is all noodles!"

Victor and I look at each other with relief and happiness. We had never been so happy to feel so foolish.

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Li-Fraumeni Family

It was an 'air traffic controller' day in MRI.

Interruptions were frequent. Phones were ringing to expedite MRI scans, clinical teams were coming to discuss cases, and floor residents were coming to request urgent add-on cases. My fellow's phone was also ringing for scan checks before the MR technologist took the patient off the table.

My fellows and residents were waiting to review their cases. It was almost noon, and we had not yet had time to go over any of the morning cases nor even those from the previous evening.

Our oncologist arrived with his team in tow and said in his soft and gentle voice, "Hello, Hello." He is our brilliant oncologist and cancer geneticist who runs clinics for cancer predisposition syndromes.

Quickly recognizing the purpose of his visit, I responded, "Hello, we had an LFS family scanned on last night's whole body MRI list."

LFS is the short form we use for Li-Fraumeni syndrome, one of the devastating cancer predisposition syndromes with an almost 100% chance of getting at least one cancer in a lifetime. More often, most children we saw had one, two, and sometimes three different cancers before transitioning to adult care.

Our oncologist runs a comprehensive screening program for these families. He detects these tumors in early asymptomatic stages with various blood tests and imaging and prolongs their survival.

We had these families with two, three, or even four siblings visiting us every three months for their ultrasounds and yearly for their whole-body MRI and brain MRIs. On last night's list, three of five whole body MRI scans were from a single family.

"Yes, the brother has had polyps removed from his colon," he starts, telling a not too unfamiliar history typical in LFS families. "The older sister had osteosarcoma, and the younger sister was treated for adrenocortical carcinoma." "Sorry to catch you early, but as you know, these families are very anxious to know the results after their scans," he adds.

"Not at all. I cannot imagine how stressful it would be to go through this anxiety every three months," I replied. "We can go through the images with you; my fellow has looked at them. We will be happy to call you if we come across anything unusual after reviewing the scan in more detail later. Of course, please read the final report for any other detailed findings."



I call my fellow to review the images together. We go through the scans one by one, and when we reach the brother's scan, the oncologist says, "He is a pretty smart kid. When he was diagnosed with colonic polyps, his older sister had already had her osteosarcoma resected. This curious guy searched the internet to see why two cancers had occurred in the same family. He found that it could occur in Li-Fraumeni syndrome. In his next clinic visit with his sister, he asked me, 'Could my family have Li-Fraumeni syndrome?' That prompted us to send the genetic testing that came back positive for *TP53* mutation."

We all looked at the oncologist, amazed by the curiosity and forward-thinking of a child of this age.

"Yes, this child diagnosed Li-Fraumeni syndrome for himself and his family," responded the oncologist, nodding his head in affirmation.

Fortunately, we did not find anything 'new' in all three siblings this time, relieving the family of anxiety for the time being.

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Loonie, Toonie, or Button battery

Detecting foreign bodies that are swallowed, aspirated, shoved up the nose, or stuck in the ear by kids has always fascinated me.

Nuts and coins, pins and pens, buttons and bones are the usual culprits. But anything that can fit into a child's mouth can be found in their body. Have you seen Spongebob Squarepants dancing in the stomach, a tired Mickey Mouse resting in the cecum, or small magnets lined up in the small bowel ready to march in a military parade?

How about safety pins poking neighboring bowel loops to irritate them, or airplanes flying in the trachea making whistling noises.

Decades ago, a pediatric resident collected all of the foreign bodies retrieved from various body parts over a period of three months. These same foreign bodies are actually framed on a wall in the pediatric radiology department. When reviewing the topic of foreign bodies with the residents and fellows, I often advise them to view the exotic collection hanging on the wall.

One morning, as a junior faculty member, I reviewed overnight radiographs done in the emergency department with a pediatric radiology fellow.

Those were the days before a single electronic patient chart for all departments existed. Days without today's easy access to charts with a single click—the days of paper charts. Days when radiologists had no access to patient charts.

While that has changed, some things never change. The history provided on imaging requisition forms still remains minimal and often unhelpful, usually just consisting of a phrase: rule out obstruction, rule out pneumonia, or rule out fracture.

Sometimes, the provided history is just an abbreviation, which leaves the radiologist at a loss unless familiar with these non-standard abbreviations so rampant in medicine, such as r/o PNA for rule out pneumonia. And sometimes, we are just told to follow up, although it is often unclear what we are following up on.

Fortunately, we lucked out with the next chest radiograph that popped up. The requisition form gave the history "3 y/o possibly swallowed foreign body."

My fellow starts dictating the findings, "There is a round, radiopaque foreign body that becomes flat on the lateral view and could be a coin. It's in the upper esophagus." After a small pause, "But ... it has this unusual lucent ring within it."

"So, what do you think? Dime, quarter, or loonie?" I ask, trying to trick her.



She didn't fall for it, and replied, "I have not seen one before, but I remember that button batteries can have that lucent ring within. On the lateral view, it shows a step at the margin. Is it a button battery?"

"Bingo! Button battery it is! How is it different from a coin?"

"Oh, it can release chemicals and cause mucosal damage. It can lead to perforation and even fistula formation with the adjacent structures. If it is close to vascular structures, such a fistula can be life-threatening."

"So, what should we do?"

"I think we should immediately call the physician."

"Absolutely!"

We started with the emergency department. After 5 minutes of listening to jazz music on the phone, we were told that the patient was admitted under pediatrics. We finally get a hold of the resident taking care of the child. We were relieved to learn that our emergency room physician had immediately recognized the button battery. ENT had been promptly consulted and had already successfully removed the battery using a scope that previous night.

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So that another child does not lose their Christmas to a small-bowel intussusception!

"Hey, how are you?", Neil asked, coming towards me. I was grabbing some tea and snacks during the coffee break at a radiology conference. Neil is a community radiologist who trained in our residency program. He was now practicing in the periphery of the province.

"I am good, Neil. How about you?" I replied.

"I am doing well. That was a great pediatric session, and your talk was good as usual!"

"Thank you. I'm glad you liked it."

"Hey, can I ask you something?"

"Sure."

"Why do you always repeat that multiple-choice question about intussusception management in your talk?"

My talk had a multiple choice quiz to be answered by the audience with their keypads. It included an ultrasound image showing a 1.8 cm diameter intussusception with the accompanying question:

"How will you treat this 3-year-old with abdominal pain, diarrhea, and vomiting?"

It had four answer choices:

- a. Air enema reduction
- b. Contrast enema reduction
- c. Hydrostatic reduction under ultrasound guidance
- d. No reduction required

"Well, Neil, there is a little story behind it," I replied.

A few years ago, I was on call on Christmas Day. One good thing about being on call on Christmas was the free meal given out in the hospital cafeteria. After quickly finishing our dinner, my resident and I called for our next patient from the emergency department for his ultrasound. The history read, "13-year-old with outside ultrasound showing intussusception. For air enema reduction." It is our practice to re-perform the ultrasound to confirm the presence of an intussusception before we take the child for an air enema reduction.

"I don't see any intussusception," said my resident coming out of the ultrasound room.

"Really? Let's look again to make sure," I said.

We both went inside to scan a healthy-looking teenager who was comfortable on the bed and talking to his mother.

"It's a busy hospital! We waited a long time to see you guys," complained the patient's mother.

"I am sorry for the long wait. The emergency department is busy today," I replied. "What time did you arrive?"

"Oh my God, don't ask. We have been dealing with this since yesterday, and we are not from this city," she said then proceeded to tell us their journey over the last 24 hours.

They were from a small town three hours away from the city. The boy developed some abdominal pain, nausea, and vomiting on Christmas Eve. They went to the local emergency department, where an ultrasound was performed, and they found an intussusception. They were sent to our tertiary care pediatric hospital with the CD containing his ultrasound images for us to perform an intussusception reduction.

They drove to the city early in the morning. After waiting hours in triage before ultimately seeing one of our emergency physicians, it was already late afternoon. They then waited a few more hours before finally reaching the ultrasound table.

I could not find any intussusception after thoroughly scanning the boy.

"We do not see the 'knot' that they saw. It has resolved," I explained to the mother.

"Oh thank God. So that treatment is not required?" She seemed relieved.

"No, that is not necessary now. Can we see the CD you are carrying?" I was curious to see what kind of intussusception they saw. The child was quite outside the typical age range for an idiopathic ileocolic intussusception. Those are the intussusceptions that are larger than 3 cm in diameter, typically located on the right side, and, which require treatment by enema reduction.



My resident and I checked the images on the CD. Some images showed a small, 1.8 cm intussusception in the left flank. Immediately recognizing it to be a small-bowel intussusception, we shake our heads at one another in disbelief. Small bowel intussusceptions are usually incidental findings and do not require any treatment.

"I get it now! So this is the same 1.8 cm small-bowel intussusception you show in the multiple-choice quiz?!" exclaims Neil, having an 'a ha' movement. "So, you are trying to educate community radiologists on how to differentiate an ileocolic intussusception from a small-bowel intussusception?"

"Yup!" I affirm.

"So that another child does not lose their Christmas to a small-bowel intussusception!" he concludes. We giggle.

Written by: Govind B. Chavhan Illustrated by: Ailish Coblentz Edited by: Angela Davis and Shannon Farmakis

(**Disclaimer:** This story/blog/snapshot into a day in pediatric radiology department is purely fictional. All the names used for patients, technologists and radiologists are fictional and any similarity is purely coincidental.)

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How does one become a pediatric radiologist in Canada?

Our department had undertaken initiatives to increase awareness about radiology and radiologists amongst our patients. One of the initiatives was to place big posters on the wall in many places throughout the department.

The posters had individual photographs and profiles of all of our radiologists with their degrees and certifications. They mentioned our areas of interest, such as body imaging, MRI, ultrasound, etc.

Then there was the question "What research is your radiologist currently working on?" and below that was a current list of the research projects being done by that radiologist.

Besides the profiles, there were smiling pictures of the radiologists, as formal as possible and professionally taken - the perfect profile pictures.



In the lower left hand corner of the poster at the end of all our profiles, was a special box. A box showing how educated we were, informative for some, and hopefully, a box of inspiration for some little ones.

Its title read:

"How does one become a pediatric radiologist in Canada?"

With an answer below it:

A pediatric radiologist is a medical doctor who, after four years of medical school, followed by five years of radiology residency training, undergoes additional training in a one-to-two-year fellowship program to become subspecialized in childrens' radiology."

We started seeing the impact of these posters soon after they were put up. We would see parents in the corridors reading our profiles and pointing out how educated we were with their kids.

Others would be heard checking their kid's math skills by asking them, "How many years does it take to become a pediatric radiologist?"

The impact was not limited to the corridors. When I would enter the ultrasound rooms to check scans or go to the CT area to talk to patients, I was greeted cheerfully by the parents. "Hello," they would say, "I read about you on the wall! It's great to meet you!"

Some would even introduce me by my name to their kids and remind them, "This is the doctor we were reading about".

I will never forget one such interaction. The most enthusiastic interaction of all, stimulated by our wall profiles.

A young couple in their twenties greeted me. They were here for a brain ultrasound for their first baby. The baby had an increasing head circumference noticed by their pediatrician.

"Hello, Doctor. We read your profile on the wall, and it is nice to see you in person!" said the young father smiling widely. The young mother added, "It's nice to meet you! Oh my God. You all study so long and do such cool research. We feel so good coming to this hospital."

"Thank you. It's very nice to meet you, too" I replied, a bit overcome.

"My sonographer has taken all of the pictures. I just want to take a quick look at something myself," I added, explaining the purpose of my visit.

I quickly scanned the baby and confirmed the presence of the bilateral subdural collections that my sonographer had seen. The collections were very thin and without any mass effect or midline shift. I asked them to wait for a while so that I could discuss the findings with their pediatrician.

I walked back to the reading room. After 12 years of training, the presence of bilateral subdural collections automatically brings one thought to mind. When these are seen, it is my duty as physician and radiologist to raise the possibility of nonaccidental trauma as a cause of the subdural collections.

I discussed the findings with the pediatrician on the phone. He had no concerns about these young parents' behaviors, but neither did he have any clear history of trauma to explain the subdural collections.

Unfortunately, we had to decide to send this family to the emergency department for further workup. I went back to the room, explained the findings to them, and communicated that further workup was needed to determine the cause.

I never felt so bad while coming out of a patient's room before. The credentials on my poster and list of cool research projects were insignificant compared with what the parents were being told. Even after all of my training, I still felt horrible having to raise the possibility of child abuse about this seemingly nice young couple.

I did follow up on this baby. Fortunately, there were no concerns for child abuse and the patient was doing well. Unfortunately, not all kids are so lucky, and the radiologist's report of certain findings do lead to the suspicion and subsequent confirmation of nonaccidental trauma. However, it is through the care of the clinical team, including the radiologist, that these patients are treated and removed from the environment in which they were harmed. While the circumstances surrounding these cases are sad, we do feel relief on some level when we are able to take part in saving a child's life.

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