

PedsCases Podcast Scripts

This is a text version of a podcast from PedsCases.com on the “**Pediatric Surgery**.” These podcasts are designed to give medical students an overview of key topics in pediatrics. The audio versions are accessible on iTunes or at www.pedcases.com/podcasts.

Introduction to Pediatric Surgery

Developed by Amarjot Padda, Chris Novak, Dr. Melanie Lewis and Dr. Bryan Dicken for PedsCases.com.
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Introduction:

Amarjot: Hi my name is Amarjot Padda and I’m a medical student at the University of Alberta. Today, I’m joined today by Dr. Lewis and Dr. Dicken. Dr. Lewis is a general pediatrician and associate professor in the Department of Pediatrics at the University of Alberta. Thanks for joining us today, Dr. Lewis.

Dr. Lewis: No problem, happy to contribute the general pediatric perspective.

Amarjot: We are also joined by Dr. Dicken, a Pediatric Surgeon and Associate Professor of Surgery at the University of Alberta. Thanks for join us Dr. Dicken.

Dr. Dicken: Thanks for having me.

Amarjot: This podcast serves as an introduction to pediatric surgery for medical students. We will be reviewing the process of a surgical consultation, the operation, as well as post-op and follow-up considerations. Main objectives of this podcast include:

- Introduce students to pediatric surgery
- Review important points to consider when referring to a pediatric surgeon
- Explore how to talk to children and their families about surgery

Let’s start with a clinical scenario:

You are a third year medical student in a general pediatrics rotation. Today you are seeing Ben, a 1-week old infant coming in for his first well-baby check-up. On history he is feeding and growing well. On physical exam, his vitals are normal, his lungs are clear, and he has no appreciable murmurs. His newborn hip exam is normal, but during his hip exam he begins to cry. While he is crying, you notice a mass protruding into his right inguinal region. Once he is comforted you continue your exam to find a small mass in the right inguinal canal, extending into the scrotum. The mass is non-tender, does not trans-illuminate, and is reducible with gentle pressure. What is the most likely diagnosis for this physical finding, and what would be the next steps in management, Dr. Lewis?

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Dr. Lewis: This is obviously a congenital inguinal hernia, which are found in 1-5% of all newborns and are most common in boys due to a patent processus vaginalis. It is also more common in pre-term infants. Inguinal hernia repair is actually most common surgical procedure performed in children. It appears that this hernia is reducible and is not incarcerated at this time. This defect will require surgical repair, but as it is not incarcerated or strangulated, it would just require a non-urgent referral to a pediatric surgeon. In the meantime we would have to educate the family on the signs and symptoms of an incarcerated hernia, and inform them when it might be more necessary to seek urgent care, such as if the infant is vomiting or has inconsolable crying. A pearl for medical students is to remember if you see an infant with signs of a GI obstruction, don't forget to check the diaper for an incarcerated hernia.

Amarjot: Other than this case of inguinal hernia, what are some other common reasons that pediatricians and family physicians refer to a pediatric general surgeon?

Dr. Lewis: It depends on the setting you're working in. When I was working in the pediatric emergency department, the most common referral was for potential appendicitis and pyloric stenosis. When I'm working in my Down syndrome clinic, the most common reason for one of my patients to have seen a pediatric surgeon is for an intestinal atresia, most commonly duodenal atresia. In my general outpatient setting, my most common referrals are for hernias, hydroceles, undescended testes and for fundoplication in children who have significant reflux complicated by aspiration. If I were a smart medical student in an upcoming rotation in pediatrics or pediatric surgery, I would certainly look into these entities and have an idea of how they present, how they are investigated and how they are managed.

Pre-consultation:

Amarjot: As a pediatrician, do you have any strategies for telling a family that you are referring them to see a surgeon?

Dr. Lewis: First of all, it is important to explain your concern to the parents and clear rationale for the referral. It is always helpful to discuss with the family your expectation for the referral which is often a potential surgical intervention or diagnostic procedure.

Amarjot: In general, what information, including potential lab work and imaging, does a surgeon need prior to sending a referral? (History, physical examination, lab work, imaging)

Dr. Lewis: The first thing is that the surgeon requires clarity around the presumptive diagnosis or concern. Secondly, the surgeon requires a relevant history, a complete physical exam, and a list of current medications, allergies and immunization. The thing that is different in children than adults is that most children don't require pre-op blood work. Things that are important to note, however, are special considerations such as if the child is anti-coagulated or if there is medical complexity that requires a pre-op anesthesia consult, or a post-op intensive care bed.

Amarjot: Thanks Dr. Lewis. Dr. Dicken, What feedback do you have for medical students regarding how to prepare a good surgery referral?

Dr. Dicken: A complete history and physical exam is paramount, and for me the past medical history is key. Many times when patients are being visited by pediatricians, they are being seen for higher and more complex medical issues, and so understanding any underlying cardio or pulmonary disease greatly influences the approach and pre-operative measures.

Amarjot: Are there any specific pearls related to this case, of an inguinal hernia?

Dr. Dicken: That is an excellent question. Again, a very careful history and more importantly a good physical examination is all that is needed. I would suggest that an ultrasound is unnecessary, not just in hernias but also for hydroceles and undescended testes. They add little to the work-up and often cause delays.

Consultation:

Amarjot: What are the top 5 most common referrals to pediatric surgery?

Dr. Dicken: Inguinal hernia, umbilical hernia, GERD, G-tubes, and chest wall deformities.

Amarjot: Let's discuss the surgical consultation. Dr. Dicken, Can you describe what a surgical clinic is like?

Dr. Dicken: A surgical clinical is similar to most clinics. The patient is admitted into the clinical space, they are directed into a patient care examination room, I visit to patient to get a history and physical examination, and discuss what I think needs to happen afterwards.

Amarjot: What are some common parent concerns when their child is going in for surgery?

Dr. Dicken: I think there are three main concerns by most parents—the first being pain, the second being the risk of complications and finally cosmetics.

Amarjot: How do you talk to a child about having a surgery?

Dr. Dicken: My practice is quite varied because the age ranges from premature babies to seventeen year olds, so the discussion depends on their age. However, I am very frank with my discussions with family in front of children. I think it is important that the children know they are having surgery and what that surgery involves.

Operation:

Amarjot: What is the day of the surgery like for a child?

Dr. Dicken: It usually begins very early; most children arrive by 6 am. They spend a lot of time in the pre-operative holding area until their cue arrives. Children get some education by the pre-operative nurses, and from that time until surgery they can play games or watch TV. Then, they go into surgery. After surgery they go to a post-operative holding area where they can be joined by their parents.

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Amarjot: What are some things that the pediatric surgical team can do to make children feel supported and safe during a surgery?

Dr. Dicken: I think this is where pediatrics differs tremendously from the adult population. There is more patient-centered care and parents are allowed to accompany children through most of their journey. At least one of the parents can join the child in the OR until the time of the anesthetic induction. Once the child is asleep, parents are asked to leave the room. But, parents can join the child shortly after when the operation is over.

Amarjot: Are there any special challenges to performing a pediatric surgery?

Dr. Dicken: Again, the challenge is the age range we experience. Very premature infants in the 500-600 gram range differ quite considerably from a seventeen year old who has adult physiology. Also, I think the spectrum of procedures we perform also makes it unique.

Post-Op and Follow-up:

Amarjot: Let's now discuss some of the post-op and follow up considerations for pediatric surgery. Dr. Dicken, What follow-up is required after a patient has a surgery?

Dr. Dicken: Your relationship with the primary care physician of the patient can determine their follow-up. For example, some of my colleagues have a very good relationship with their patients, like Dr. Lewis. In that case, I may give the family the opportunity to follow-up with Dr. Lewis as long as the surgery was uncomplicated and the parents were comfortable in her care. In general, I see most patients 4 to 6 weeks post-operatively.

Amarjot: Thanks Dr. Dicken.

Dr. Dicken: Your welcome.

Amarjot: Dr. Lewis, as a general pediatrician, what information is important to receive after a surgery

Dr. Lewis: I think the most important information is around wound care, timing of suture removal and expectations for follow up.

Amarjot: What are some important complications of surgery that a general pediatric or family physician should be aware of in a child after surgery?

Dr. Lewis: The most common complication after surgery is a wound infection, so it is important for the family to know what that may look like and when they need to seek care.

Amarjot: Thank you Dr. Lewis.

Conclusion:

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Amarjot: Thank you Dr. Dicken and Dr. Lewis for joining me today. In this podcast we reviewed important concepts of pediatric surgery as they relate to medical students. We discussed important points to consider when referring to a pediatric surgeon as well as ways to communicate with children and their families about surgery.