Tricking Kids into the Perfect Exam: Tips for Evaluating the Pediatric Patient

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While pediatric patients may be small, they often can be as intimidating to us as we are to them. The factors that add to this anxiety are relative inexperience with children compared to adult patients,[1] and the inability of younger patients to communicate or cooperate with the physical exam. While each physician may vary with style points and favorite tricks, here are a few tips for the pediatric physical exam to improve your interaction and comfort level.

One of the first tasks as an emergency physician is to put the patient at ease. Talk to the child as well as the parents. For older children, introduce yourself to them first before the parents and sit down on the bed or chair as to not tower over them. Try to facilitate the relationship and open up communication by noticing something cool about them (i.e. light-up shoes, Dora T-shirt or fun toy).

While doing the actual physical exam, try to use the parent's lap as much as possible as the child is most comfortable there. To distract and calm them, consider telling them a story throughout the exam or try to make the physical exam a game – play with the instruments. Finally, consider having something fun in your pocket such as stickers or a bubble-blowing pen to make the experience more enjoyable.

In general, when evaluating any child, observation is the best initial diagnostic tool. The degree of alertness and interaction, responsiveness to parents and respiratory status are all valuable measures of illness that may either suggest or eliminate concerns of toxicity.

After observation, it is important to begin the exam with auscultation of the heart and lungs as this is usually when the child is calm, quiet and most cooperative. Do not forget that a negative lung auscultation is not sufficient to rule out significant pulmonary disease; the appearance of the patient (tachypnea, respiratory distress) is much more predictive.

Finally, always save the worst for last. The last items to perform in the physical exam should always be those things that are most threatening to the child, including looking in the ears and mouth.

Here are a few cases to illustrate the importance of the physical exam and emphasize other tips for evaluating those age groups that provide the most anxiety and difficult exam.

Newborn

Case 1: A 3-week-old male presented to the emergency department for congestion and cough. Mom stated that the infant was not eating as well, but had normal wet diapers. No fever noted at home or on exam.

As mentioned above, it is important to observe the newborn. One of the best tips is to undress and hold the baby. Holding allows the clinician to assess multiple things at once, including level of alertness, respiratory status and tone. This initial assessment gives the clinician a good sense of "sick or not sick."

It is also important to have the baby undressed to do a careful examination, looking for rashes, bruises, hair tourniquets, etc. During the exam, this newborn was observed to have an apneic episode. The patient was admitted for an evaluation that ultimately revealed a diagnosis of pertussis.

Infant

Case 2: A 5-month-old male presented with fever and fussiness. The patient was seen five days earlier with fever and URI, diagnosed with otitis media and discharged home with amoxicillin. Prior to arrival, the patient had multiple episodes of vomiting and decreased urine output.

Initial assessment revealed an ill-appearing, febrile infant. While observing the infant and beginning the physical exam, it is important to place your hand on the infant's head and assess the fontanelle. A fontanelle is measured as full, flat, or depressed. Cup your palm on the back of

the baby's head and then move forward. The curve of your palm should touch the fontanelle if it is normal. If the fontanelle doesn't touch, it is depressed; if it pushes your hand up, it is full.

In young infants, a bulging fontanelle may be seen with meningitis, but meningismus is rare before one year of age. Another possible exam finding in infants with meningitis is a paradoxical response to consoling maneuvers like cuddling. When a caregiver "cuddles" an infant, the meninges are stretched and irritated making the infant *more* fussy. By contrast, the same infant will calm when laid flat.

This infant's fontanelle was full and tense. Throughout the exam, the patient was irritable and difficult to console. The infant was appropriately resuscitated and underwent a full septic work-up, revealing pneumococcal meningitis.

Toddler

Case 3: An 18-month-old male presents with complaint of seizure witnessed at home 20 minutes prior to arrival.

Many pediatric patients will present to the emergency department after a seizure. When evaluating this patient, it is crucial to do a good neurological exam. The biggest tip for the pediatric neurological exam is to stop, look and listen. You will learn the most from the child's spontaneous activity, including mental status, cranial nerves, coordination, and motor status.

Assess patients based on developmental milestones for their age group. If age appropriate, make sure to watch them walk. Also, watch the child sit unsupported as truncal instability may be a clue to vertiginous symptoms or cerebellar pathology. Try to carry one thing that could fake for a toy or draw a face on a tongue depressor to help attract the child's attention.

Upon examination of this patient, he had right-sided weakness which resolved within an hour. The patient was diagnosed with Todd's paralysis and new-onset seizure disorder.

Preschooler

Case 4: A 3-year-old female presents with abdominal pain and fever over the past day. Patient has some vomiting and diarrhea. Emesis is nonbilious and nonbloody. Diarrhea is watery and yellow. The patient has also had decreased oral intake and urine output. On exam, the patient is febrile and appears uncomfortable.

Performing a good abdominal exam is critical for the assessment of this patient, but can often be challenging. Children cannot developmentally pinpoint the location of abdominal pain until they are at least four years old, and perhaps not even then. With symptoms and an exam that are nonspecific, abdominal pathology can be very difficult to diagnose in this age group. Attempt to calm and distract the patient as much as possible.

For infants, make sure to have a pacifier available during the abdominal exam. Another option for the crying infant is to use sucrose to calm them during auscultation and palpation. Flexing the hips will also facilitate relaxation and a better exam. For patients that are ticklish, you can have the child place their hand on yours and push down as if they are doing the exam.

For children with abdominal pain, make sure to always undress the patient and evaluate for rashes to assure that diseases like Henoch-Schönlein Purpura (HSP) are not missed. Also, referred pain is very common, and pneumonia or strep throat may present with abdominal pain of any location with focal or diffuse pain on exam.

Using the above techniques, the patient in the case was found to have significant tenderness without rebound. Upon further evaluation, the patient was found to have acute appendicitis.

The above tips and tricks should allow for a smoother encounter with the pediatric patient. If the tactics are not working, do your physical exam in stages. Start quickly with the most essential, then return frequently to perform each additional layer. Always remember that a graceful approach will go a long way with assessing children. ■

Figure 1: Additional Tips & Tricks

General
Always undress.
Eyes
If trying to get a newborn to open their eyes, holding the infant's head and dipping it down will cause them to open their eyes.
Never try to pry a baby's eyes open when they are crying as you will not be able to over power them and will just anger them more.
Infants should fix and follow a moving object with both eyes by 3 months of age. Use bright objects or noises to help assess extraocular movements.
Ears
If having a hard time looking in the ears, hold arms above head.
If unable to turn their head, wiggle the otoscope light in front of their eyes and then move it to the opposite side of the ear you want to look in. The child will often track with the light and turn their head so their ear is then right in front of you.
Have parent stabilize the head. Use one hand to grab the pinna while holding the otoscope with the thumb and index finger and using the little finger and heel of the hand to stabilize the otoscope against the side of the face (See Figure 2).[2]
Mouth/Throat
Wetting the tongue depressor makes it taste better.
Have the child pant like a dog when doing a throat swab as it helps prevent gagging.
Heart
If worried about murmurs, gently and briefly blow in the face of a neonate which slows down their heart rate momentarily so that you can better ausculate for murmurs.
Lungs
If you want them to take a deep breath, can have them blow out the light on the otoscope or can ask them to pretend to blow out the birthday candles.

Figure 2: Ear Exam

References

1. Langhan, M. et. al. How comfortable are emergency physicians with pediatric patients? J Emerg Med. 2004;26(4):465-469.
2. Gifford, K, Fall, L. "Pediatric Physical Exam." American Academy of Pediatrics. 24 Apr 2008. http://www.aap.org/sections/ypn/ms/educ_resources/PE%20pocket%20card%2012-18-07.doc.