



Emergency Medicine: Reviews and Perspectives

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Pediatric Pearls: Pediatric Gynecology Complaints

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Take Home Points

- Neonates with blood in the diaper may have estrogen withdrawal bleeds.
 - Difficulty catheterizing female infants may be due to labial adhesion.
 - Preschool children with complaints of pain may have vulvovaginitis and should be examined.
 - Dysuria may result from vulvovaginitis or urethral prolapse rather than urinary tract infection.
 - Gentle irrigation may remove vaginal foreign bodies.
- **What are some top gynecologic issues that lead children to present to the emergency department?**
 - **In neonates, the most common complaint is blood in the diaper.** You will need to make sure it isn't coming from the GI tract. However, one of the most common presenting complaints is estrogen withdrawal bleeding. This typically presents between 5 and 14 days of life. The baby is exposed to estrogen while in utero. After birth, the estrogen withdrawal causes shedding of the uterus. This is benign and will improve on its own. It is very alarming to parents and you can assure them that all is well.
 - **Nursing staff may complain of difficulty finding the urethra to perform catheterization.** This is due to labial fusion. It is also common, benign and self-limited.
 - Chronic, low grade irritation of the prepubescent hypo-estrogenized labial tissue can lead to fusion of the labial minora and block the vaginal introitus. The urine can usually pass through without difficulty but it looks unusual.
 - As long as the child is urinating, you can let parents monitor it and ensure good hygiene. Or you could prescribe a topical estrogen such as a conjugated estrogen like Premarin or Estrace. Have them apply a small amount daily and massage into the labia. They will typically separate within a few weeks.
 - Don't try to manually separate them. It will be painful and likely to seal back up as they are healing.
 - The estrogen cream is unlikely to cause complications if used in a sparing amount. They may see some estrogen effect locally. This usually involves some increased pigmentation or a small amount of vaginal discharge. This is transient and should stop upon cessation of the estrogen cream.
 - The labia are at risk of refusing. Parents should continue to care for the area with frequent diaper changes and bathing daily. Once the labia separate, Vaseline should be applied liberally to keep the labia separated.
 - **A mother brings in a preschool age child with complaints of streaking in the underwear with discharge and small amount of blood.** The mother is obviously worried about abuse although there is no reported history. How do you address this concern? This is a common complaint and most cases are not related to abuse.
 - **Our job is to determine if the concern about abuse is theoretical or if there is a more specific concern or disclosure.** "Are you just worried because she is complaining about pain and you don't know why? Or do you have another concern?"

- **Examine the area.** Make sure that there is no sign of injury or retained foreign body. Make sure it isn't foul smelling. Most often you will see generalized erythema with white gunk or discharge. The child may report itching and there may be evidence of excoriations. This is usually localized to the external vaginal mucosa.
- **This is vulvovaginitis.** It is combination of low estrogen in the vaginal area and poor hygiene in the independent toddler. The recommendation is to remove all irritants and use the mildest topical agents to promote healing.
- **Patients should avoid bubble baths or sitting in a soapy tub.** It's ok to let the child sit in a tub with water but save the soaping for the end of the bath and rinse the area afterward with clear fresh water to remove any residual soap. Eliminate baby powders or scented lotions. Avoid constrictive tight or synthetic pants or underwear.
- **Use a bland diaper cream like Desitin, Vaseline or Aquaphor.**
- If these interventions don't work, they need to follow-up with their pediatrician because there are a few other things that can cause true vulvovaginitis.
- **This is rarely due to yeast, unless the child has recently completed a course of antibiotics (and it is unlikely even then).**
- **Streptococcus can cause vulvovaginitis.** This may also have perianal involvement. There may be an associated pharyngitis. If they are complaining of throat pain and vulvovaginitis, swab the throat. You can't do a rapid strep test of the vagina but you can do a topical culture of the perianal and vaginal skin.
- **If there is a copious amount of vaginal discharge from introitus, you may consider a bacterial infection.** Shigella is notorious for causing vaginitis. If they have had recent diarrhea, you may want to test the perianal area, stool and vagina for Shigella.
- **Foul-smelling copious discharge from the introitus may indicate a small foreign body.** In children this age, it is most likely to be little bits of rolled up toilet paper. This may require treatment by a pediatric gynecologist or irrigation.
- **Management of vaginal foreign bodies depends on your comfort level.** One option is to give an anxiolytic to relax them. Place the child in an open frog leg position. Use an IV catheter without the needle to gently irrigate with warmed saline. This can irrigate foreign bodies. This should not be traumatic for the child.
- **If you are concerned for something more complicated, referral to a gynecologist or pediatric surgeon is appropriate.**
- **How are vaginal exams different in children?** The best way to do the exam is any way the child is comfortable and compliant. If they are screaming and squeezing their legs together, you won't get very far.
 - In children who are fearful, you can have them partially incline on the parents lap and have the parents hold the legs in frog leg position to allow you to look.
 - If the child is compliant, the easiest way to look is to have them lie on their back with feet together and knees out.
 - If there is concern for injury or abuse, it may be best to place the child in the knee chest position. The child is belly down with their knees tucked under them and their bottom in the air. You are looking at the posterior part of the vagina and vaginal introitus. It provides a different view of the tissues there.
 - Prepubertal children should never have an internal exam in the ER. This is usually done endoscopically in the operating room under deep sedation by a pediatric gynecologist or surgeon.
- **What if you see something abnormal around the urethra in a preschool age child?**
 - This is seen more often on the board exam than clinical practice. However, you should be aware of it as it can look dramatic. This is urethral prolapse.
 - It typically occurs in girls between 2-5 years of age and there is a significant predominance in African American children.
 - It can look beefy and friable. The friability can lead to bleeding, dysuria and discomfort.
 - **You should examine children in this age group with dysuria rather than assuming a UTI.** It may be due to vulvovaginitis or urethral prolapse.

- Urethral prolapse is thought to be due to a low estrogen state. There is no need to reduce these. They will spontaneously involute with treatment.
- The treatment is topical estrogens similar to labial fusion. This helps the tissue firm up and involute on its own. The condition may be exacerbated by a Valsalva maneuver such as with cough or constipation. You should treat the constipation if present.
- **When should you do an external exam on an older child?** If they have pain or complaints of discharge, you should look.
 - You should also examine a child who appears to have had puberty but hasn't had her period. There may be complaints of abdominal pain, chronic abdominal pain or recurrent visits for constipation. This may be due to imperforate hymen and you won't make the diagnosis if you don't look. They may be diagnosed via ultrasound that shows an enormous fluid filled uterus and vagina with accumulated menstrual blood.
 - **An external vaginal exam may be diagnostic and show a purplish bulge at the introitus.**
 - Check a pregnancy test.
 - Do not incise it. This is treated by gynecology or pediatric surgery depending on your institution. They will perform a hymenotomy in the operating room. There may be a lot of blood retained and you do not want to do this in the ER for a variety of reasons.
- **A child presents after an injury and is found to have blood on the underwear.** She is crying and resistant to the exam. When you are able to get an exam, what are you looking for?
- This is a common presentation and associated with a high degree of anxiety on the part of the family. Make sure the child can report a mechanism of injury and determine concern for sexual abuse. Most of these are not concerning for sexual abuse.
 - **The vast majority of these injuries are blunt injuries and involve some minor superficial skin tearing and contusion.** This typically happens in the fossa between the labia minora and the labia majora. You may see some oozing from a skin tear. It may not be deep but can be bloody due to the vascular supply. There may be some contusion. There is nothing to do except for gentle hygiene and clear water sitz baths several times a day for several days. The child can urinate in the sitz bath which will prevent burning while peeing.
 - **If there is a deep laceration, one that involves the clitoris or urethra, transects the labia minora or goes into the vaginal introitus or posterior fourchette, you should consider consultation with pediatric gynecology or pediatric surgery due to the potential for poor cosmesis or function.**
 - It is uncommon for kids to fall on sharp pointy things, and if there is blood coming from the introitus, you should be concerned for penetrating injury. This requires referral and urgent vaginal endoscopy to rule out penetrating injury.
- Confidence and reassurance of parents can be helpful. Your ability make a benign diagnosis with a clear treatment plan is very reassuring to parents. Most of these things resolve without any sequelae. This is a visual diagnosis. Make sure you take a look at what these conditions look like.