Diaper Rash or Something Else?

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Disclosure Information for: Drs. Lisa Zetley and Judy Guinn

Diaper Rash or Something Else?
Ano-genital Skin Findings that Raise Concern for Maltreatment

- Learners must attend the entire one-hour session and complete an evaluation to receive contact hours. There will be a code to text confirming attendance. The code and phone number will be displayed at the end of the session.

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Objectives

- Discuss common rashes of early childhood and other findings in the ano-genital region
- Become familiar with ano-genital findings which are concerning for abuse
- Learn to differentiate non-abuse findings with those more concerning for abuse

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The Red Bottom

- Brings concern for possible sexual abuse by one parent after spending time with the other parent
- Sometimes, there is more to it… father is into porn, mother is a survivor, etc.
- Nonspecific rash to diaper area often due to medical conditions such as irritation or infection
- Often due to differences in hygiene practices between households.
- What else could it be?

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Ways to Think About Skin Rashes

- Location: in one area (localized) or is the rash spread over a larger area
- What does the rash look like?
  - Bumpy vs flat vs ulceration (‘crater’)
  - Pus filled lesions vs raised (flesh colored) bumps
- Is the skin peeling?
- Is the rash itchy or painful?
- Is the concern an *abnormal finding* with normal skin or abnormal skin?

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Contact Dermatitis

- Pattern of redness is in areas exposed to diaper surface
- Usually very red skin, which can evolve into raw areas
- Often spares the skin folds and creases (diaper doesn't touch those areas)
- Diapers contain many products which can be irritating-urine absorbents, fragrance, rough liners.
- Diarrhea or prolonged time in wet diaper also may play a role in irritation

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Jacquet's Diaper Dermatitis

- Can be mistaken for Herpes or burn
- Usually starts as redness or small sores or papules (bumps) and then progresses to erosions
  - Diarrhea is often trigger
- The lesions can become small ulcers (craters) with a raised border.
- Caused by prolonged dermatitis—can be difficult to treat, takes a long time to heal.
- May involve the urethral meatus-making urination painful.
- Treatment involves barrier creams (Zinc Oxide)

Candida/Yeast infection

- Yeast is normal flora (bug) on the skin
- When skin is moist for prolonged time, and the skin barrier is altered, the yeast can “take over” and create a rash
- Triggers
  - Antibiotic use (removes other normal flora on skin)
  - Irritant diaper dermatitis or diarrhea (skin barrier alteration)
  - Thrush (yeast infection of the mouth-common in young infants)
- Usually appears as red bumps in the skin creases and where skin touches skin (deep in thigh crease, under scrotum)
- Skin can peel in more severe cases

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Molluscum Contagiosum

- Usually transmitted by skin-to-skin contact or auto-inoculation (self-spread by itching or touching).
  - Can be spread by towels or other objects
  - Swimmers are pre-disposed to molluscum
- More common (and more severe) in children with eczema
- **Genital involvement does NOT imply sexual transmission**

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Urethral prolapse

- Urethral prolapse is often mistaken for vulvovaginal infection or trauma
- Condition is most prevalent in pre-pubertal, school-aged females
- The urethral ‘inner lining’ is displaced outwardly
- Chronic constipation or prolonged coughing both can increase the intra-abdominal pressure which can lead to this condition
- Symptoms may include pain with urination, difficulty urinating, blood in the urine or pain in the perineal area
- The urethral opening appears as a beefy red ‘donut’

Rectal Prolapse

- Typically occurs in 1-5 yr olds-constipation predisposes child
- Rectal mucosa protrudes through anus, appearing as dark or bright red mass
- May or may not be painful
- Parents often state it occurred during defecation

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Impetigo

- Superficial bacterial infection of the skin (children appear well)
- Can be caused by Strep or Staph bacteria
- Often starts as single small papule (small bump) which rapidly progresses
- May see fluid filled blisters (vesicles or pustules), or may see yellow crusting on surface of skin
- Surrounding skin is often inflamed
- Lesions are itchy-thus spread is common in children

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MRSA: Methicillin-Resistant Staph Aureus

- Most often community acquired
- Cause pus filled blisters and tender sores beneath the skin (abscess)
- Single lesion can be confused with a spider bite
- As infection becomes more involved, can have fever, swelling of the surrounding tissue
- Lesions can appear similar to Herpes-need PCR test to differentiate

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Perianal streptococcal infection

- Well defined bright red margin which appears moist
- Often surrounds the rectum (perianal), rarely can have some purulent discharge
- Skin can be cracked/fissured
- Very tender and itchy
- Can cause painful defecation or blood streaked stools
- Less commonly, can have infection in vulvar area
- Usually don’t have a fever-occasionally may also have strep throat

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Bacterial Folliculitis

- Small and superficial infection of hair follicles
- Tiny small red bumps which are itchy
- Often caused by tight clothing, wet swimsuits or diapers rubbing on skin
- Children who don't 'wipe well' after BM are predisposed
- Can also be found on inner thighs

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Hand Foot and Mouth Disease

- Caused by virus (Coxsackie most common)
- In addition to having lesions on *hands, feet and in mouth*-can see lesions on buttocks and thighs
- Very contagious-spread through secretions
- Associated fever, fussiness, abdominal pain, vomiting/diarrhea, cold symptoms
- Lesions on skin can be red bumps which evolve into vesicles (pus filled bumps)
- Sores in mouth are red or whitish-can be bumps or ulcers

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Congenital melanocytic nevi AKA Mongolian spot

- Pigmented birth mark, slate blue or grey
- Appears at birth or during first year of life
- More common in persons of color
- May fade or disappear during childhood
- To differentiate between CMN and bruise, follow up in a week to determine if there are changes to lesion.

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Hemangioma

- Hemangiomas are vascular birthmarks (collection of blood vessels under the skin) that are usually identified at birth or in the first few months of life.
- They generally evolve over the first year of life.
- They usually require no treatment but may be treated if they are causing a problem. (bleeding, cosmetic appearance, irritation, infection…)
- Dermatology referral is helpful to determine best course of action. (laser, beta blockers, steroids)

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Failure of midline fusion (perineal groove)

- An uncommon midline defect that may be mistaken for scarring or injury (sexual abuse).
- Characterized by a linear area of exposed mucosal tissue from the posterior fourchette to the anus. Edges often appeared rolled.
- Risk of infection, irritation.
- Often self resolve by 2 years.

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Vaginal Opening Diameter

- Often seen by caregivers and causes alarm, concern for sexual abuse.
- We no longer measure vaginal opening diameter!
- Appearance of large opening may be due to normal state of estrogenization of the hymen tissue.

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Gonorrhea

- A sexually transmitted infection confirming mucosal contact with infected or infective secretions (sexual contact).
- Indicative of sexual abuse in children outside the neonatal period.
- May infect vagina/cervix, urethra, throat and rectum
- Testing is by NAAT (nucleic acid amplification test) which must be confirmed if positive in a prepubertal child.
- Treat with ceftriaxone

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Chlamydia

- A sexually transmitted infection confirming mucosal contact with infected or infective secretions (sexual contact).
- Often asymptomatic
- Can be due to perinatal transmission and colonize the reproductive tract for up to 3 years.
- Can infect vagina/cervix, urethra, rectum, throat
- Treat with doxycycline (7 days) or azithromycin (single dose)

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HSV

- Type 1- usually oral (cold sore)
- Type 2-usually genital
- But 1 can occur in genital region and 2 can occur in oral region!
- Results from direct contact with lesion or its secretions (sexual contact, caregiver contact, auto-inoculation, perinatal).
- Raises concern but Indeterminate for sexual abuse
- Causes itching, pain, and blistering rash. Lays dormant in body and may re-occur.
- Diagnose with PCR or culture
- Treat with acyclovir or other anti-viral

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HPV

- Human papilloma virus, AKA anogenital warts, condyloma
- Transmitted by sexual contact, caregiver contact, auto-inoculation, or perinatally
- Long incubation period
- More concerning for sexual abuse in children >5 years of age
- Diagnosis is generally by visual appearance.
- Most lesions self resolve over time and do not require treatment
- Virus lays dormant in body and may re-occur.
- Some HPV types cause risk for cervical cancer, but most visible lesions in children are not of those types.

Perianal Pseudoverrucous Papules and Nodules (AKA PPPN)

- May be mistaken for HPV
- Result of chronic irritation in peri-anal/perineal area
- More seen in children with bedwetting, encopresis or chronic debilitating conditions with incontinence

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Chancre

- Painless genital ulcer, usually solitary
- Often the first sign of primary syphilis occurring about 3 weeks after sexual contact
- Resolves in about 1-4 mo when signs of secondary syphilis appear (if untreated)
- Indicative of sexual abuse in children if not perinatally acquired.

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Straddle injury

- Fall of genital area onto object or impact of object onto genitalia
- More external (not involving hymen)
- Location is usually anterior
- History of event causing injury exists
  - Bleeding
  - Complaint of pain

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Penetrating trauma

- Sexual abuse when seen in a child
- Location is more internal (hymen) and posterior (below 3 and 9 o’clock)
- Also think about physical abuse
- Rare causes: impalement, vehicle run over

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“Senna Burn”

- A chemical burn caused by contact of skin with toxins in rapid transit stool, doesn’t have to be senna laxative.
- Margins are within diaper area, often has a diamond shape due to lining in diaper
- Often occurs “overnight” with prolonged contact of skin with stool

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Immersion Burn

- “Dip” into hot liquid, child is restrained
- Sharp line of demarcation between burned and unburned skin, uniform depth
- Lack of splash burns
- May have sparing of area of buttock where it contacts the cooler tub surface (donut pattern)
- More commonly seen in children being toilet trained
- Scene investigation by Law Enforcement is crucial to case
  - Water temperature
  - Depth of water
  - Properties of tub or sink

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Anal fissures

- Superficial “crack” or tear in peri-anal skin
- Common in pediatrics, often presents with “rectal bleeding”
- Often due to passage of hard stool or irritation from diarrhea
- Chronic fissures may be due to medical cause such as Crohn’s Disease

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Anal laceration

- Laceration is deeper than fissure
- Penetrating trauma: Sexual abuse or impalement injury
- If actively bleeding may need internal exam under anesthesia

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Vertical linear gluteal cleft bruising

- A pattern of buttock bruising indicative of abuse
- High force, high velocity impact to the buttock
- Movement of buttocks causes crimping or shearing of blood vessels at gluteal cleft resulting in vertical bruises where buttocks meet
- Not just “spanking”

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Slap injury

- A high force, high velocity injury
- Parallel linear contusions with sparing between corresponding to width of fingers, sometimes can see a handprint.
- May fade rapidly, so have child seen promptly

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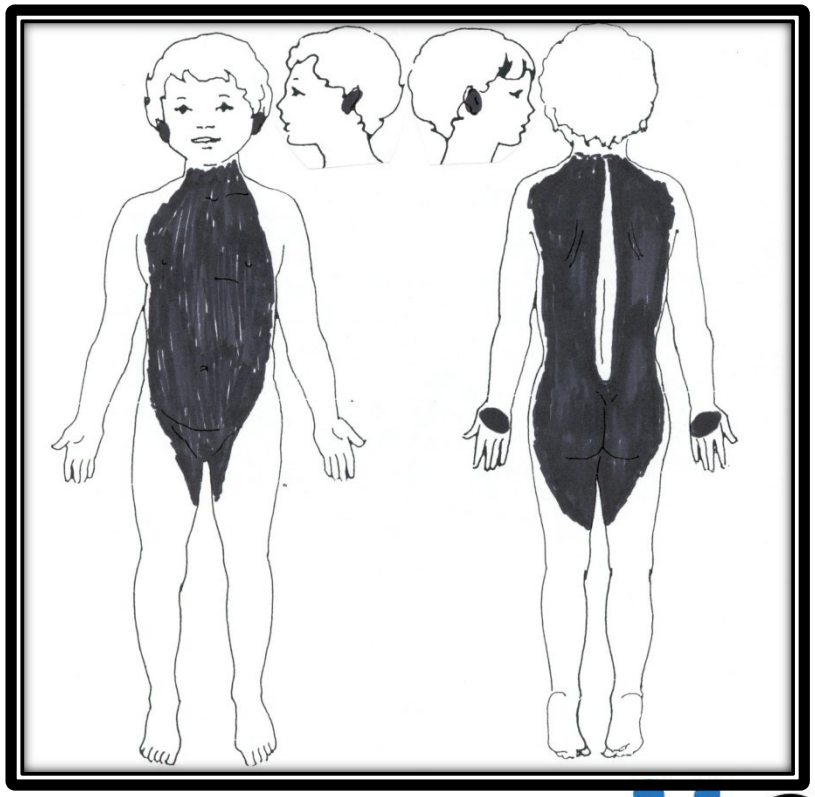
Location, location, location…

Normal bruising of childhood usually occurs over bony prominences.
Ear, genital, buttock, abdominal bruises are suspicious.



Take Home Points

- Findings in the anogenital area are not always abuse!
  - Many diaper area conditions can be evaluated by the child's pediatrician.
  - If concern for sexual or physical abuse, consider Child Advocacy Center medical evaluation.
  - Take photos! It will help determine where child should be evaluated.
  - Injuries heal quickly. Seek medical evaluation early.
  - Children who are in pain deserve early evaluation for diagnosis and treatment.
  - There may be overlap between findings concerning for abuse and those caused by medical conditions.
  - Use your medical team!

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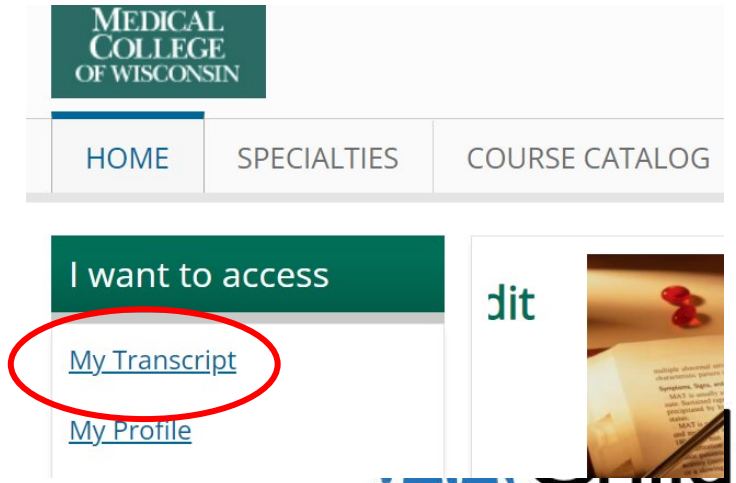

Step-by-step instructions on claiming credit: wichildabusenetwork.org/webinars.

References

- VisualDx
- UptoDate

- Zitelli, B.J., McIntire, S.C., Nowalk A.J., et.al. (2023 edition-e book) *Zitelli and Davis' atlas of pediatrc physical diagnosis. Philadelphia, PA, Saunders/Elsevier.*

These resources were utilized in preparation of discussion of multiple topics for this presentation

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