What is *that* down there?

**COMMON PEDIATRIC GENITAL DERMATOLOGIC FINDINGS**

Raquel Vargas-Whale MD, MSc, FAAP
Child Abuse Pediatrician
Driscoll Children's Hospital
CARE Team

**Objectives**

After completing this activity, the participant should be better able to:

- Recognize the common and uncommon manifestations of dermatologic genital skin conditions in children
- Understand the forensic significance of some genital dermatologic findings in children
- Describe the appropriate treatment/management for vaginal dermatologic conditions in children
What We Will Cover Today

- **Non-infectious (can be Systemic/Autoimmune)**
  - Lichen Sclerosis*
  - Lichen Planus
  - Pemphigus
  - Psoriasis
  - Seborrhea
  - Atopic Dermatitis/Allergic Dermatitis*
  - Behcet’s
  - SJS/EM

- **Infectious**
  - Bacterial vaginitis
  - Group A strep vaginitis
  - HPV*
  - Molluscum
  - HSV*

- **Developmental**
  - Failure of midline fusion*
  - Labial adhesions
  - Anal tag
  - Increased vascularity
  - Pearly penile papules
  - Venous pooling*

What We Will Cover Today

- **Vascular**
  - Capillary Hemangioma
  - Lymphangiomatosis
  - HSP

- **Other**
  - Insect bites
  - Trauma

These conditions may cause a presentation which mimics abuse...

- The conditions listed can be difficult to assess in the context of abuse because they cause:
  - Bleeding
  - Bruising
  - Blistering
  - Bumps
  - Erythema

- All are common GU pediatric presenting complaints
Lichen Sclerosus

- Often confused with sexual abuse
- May be autoimmune
- Extragenital LS should be sought
- Look for "figure of eight" pattern
- Perianal LS can cause stricture and pain
- Pruritis (itching) can be a common complaint
- Treatment is palliative

Differential DX:
- Trauma
- Chronic irritant contact with post-inflammatory hypopigmentation
- Chronic steroid use
- Vitiligo

Bullous Pemphigoid

- Presents in early childhood: erythema, erosions, pain
- Confined to the genital mucosa-self limited with remission
- Classic skin lesions are vesicular, may be single or grouped
- Extragenital sites: face, neck, palms and soles
- Biopsy is confirmatory

Pemphigus Vulgaris

- Chronic persistent autoimmune blistering disease with a predilection for mucosa
- A self-limited form of the disease presents at birth transmitted by maternal antibodies
- Lesions are vesicular and may be localized or generalized
- 80% of children present with oral lesions
- Biopsy is confirmatory
**Seborrhea**
- Infantile seborrheic dermatitis (cradle cap) can affect the diaper area.
- Most common sites affected are face and scalp.
- Greasy yellow scale is classic. *Pityrosporum ovale* may be implicated.
- Hypopigmentation and secondary infection can occur.

**Psoriasis**
- A chronic condition that may begin in childhood.
- Sharply demarcated plaques with fine, silvery scales, guttate morphology.
- In infants and toddlers frequently in diaper area and skin folds.
- “Inverse psoriasis” involves anogenital area, axillae, and ear canals.

**Irritant Contact Dermatitis As A Cause Of Erythema**
- Irritants
  - Bubble baths/shampoo
  - Deodorant soaps
  - Laundry products (i.e., fabric softeners, lotions)
  - Poor hygiene/overzealous hygiene
  - Vaginitis

**Jacquet’s Diaper Dermatitis**
- Erosive diaper dermatitis
- Uncommon and severe presentation of dermatitis.
- Typically occurs in the context of frequent liquid stools, poor hygiene, infrequent diaper changes.
**Contact/Allergic Dermatitis**

- Plant dermatitis (poison ivy)
- Nickel allergy
- Neomycin
- Perfumes

**Staph Scalded Skin Syndrome**

- Induced by epidermolytic exotoxins (exfoliatin) A and B (released by S. aureus)
- Treatment: IV abx and supportive care—much like burn care
- Prognosis is good and usually resolves by 10 days with appropriate medical management

**Behcet's Disease (autoimmune)**

- Recurrent oral and painful genital ulceration
- Ocular involvement—posterior uveitis, glaucoma
- Neurologic involvement
- Males more frequently affected

**Fixed drug eruption**

- 2% to 3% of all adverse drug reactions
- The face and genitalia are common sites of involvement
- By definition, fixed drug reactions recur in the same location with repeated drug administration
- The mechanism of action is unknown. Commonly implicated drugs are penicillin, tetracycline, sulfonamides, barbiturates, phenolphthalein, and gold salts
- When the reaction resolves, it is often followed by hyperpigmentation
Infectious (usually non STI)

• Group A beta hemolytic strep, Group B vaginitis, perianal dermatitis
• Hemophilus influenzae
• Neisseria meningitides
• Strep pneumonia and viridans
• E.coli, enterococcus and other gram negative enteric
• Shigella, salmonella, yersinia-bloody vaginitis

Other Non Sexually Transmitted Pathogens

• Candida Albicans: rare in older-prepubertal, non-DM. Broad spectrum antibiotic may increase. Causes vulvitis rather than vaginitis
• Pin worms: Can cause secondary irritant vaginitis secondary to scratching
• Scabies
• Tinea

Herpes Virus Type 1

• Can be innocently transmitted
• Can be auto-innuculated
• Can be sexually transmitted
• May look identical to Type 2
• Typing therefore not forensically helpful

Herpes Type 2

• Must consider sexual transmission...
• However, innocent spread can and does occur
Epstein-Barr Virus (EBV)
- Can cause oral and genital ulcers in both sexes
- Shallow, painful mucosal ulcers
- Systemic symptoms of infectious mononucleosis may be present
- Mono-spot can be a quick screen
- Differential includes herpes, Behçet’s, and other blistering conditions

Human Papillomavirus (HPV)
- Most common viral STD
- Positive Predictive value of HPV for sexual abuse has been found to increase with age.
  - 4-8 year olds compared to > 8 year olds

Anogenital Warts from HPV-Young Children
- Vertical/Maternal
  - Incubation period to clinical disease difficult to define (weeks – years)
  - Non-sexual skin-skin contact
  - Large asymptomatic reservoir of HPV DNA
- HPV types match in mom and infant only 57-69% indicating infants could obtain the virus from a variety of sources

HPV-Types
- Some types “favor” ano-genital mucosa
  - 6, 11, 16, 18, 31, 35
  - Over 100 types!
- Typing does not differentiate sexual from non-sexual acquisition
  - Marcoux Peds Derm, 2006
  - Handley Peds Derm, 1997
- Biopsy useful if diagnosis is in question
Evaluation of Child with AGW

- History from primary caregivers of family history of HPV (skin warts and PAP smears)
- Interview of child by experienced interviewer about sexual abuse if old enough to participate
- Inventory for sexually intrusive or concerning behaviors
- Examination with magnification of anogenital areas
- Screening for STI's

Differential Diagnosis of HPV

- Molluscum contagiosum
- Bowenoid papulosis
- Langerhans cell histiocytosis
- PPPN
- Neurofibromatosis
- Lymphangioma Circumscripum
- Condyloma lata
- Juvenile Xanthogranuloma

Molluscum Contagiosum

- A poxvirus
- Humans only known reservoir of the virus
- Easily transmitted person to person
- Incubation period: 2-7 weeks
- Spontaneous resolution occurs in 6-9 months without treatment
- Complications include "impetiginization" and intra-ocular spread
Epidermal Nevus
- Congenital cutaneous anomaly characterized by distribution in a linear, whorled pattern with midline demarcation
- May be present at birth but not clinically apparent until childhood as verrucous hyperpigmented patches
- May become painful and eroded resulting in an inflammatory linear epidermal nevus (ILVEN)

Extragenital Epidermal Nevus

Developmental and normal variants
- Labial adhesions
- Increased vascularity
- Failure of midline fusion
- Anal tag
- Pearly penile papules
- Diastasis ani
- Venous pooling

Differential of Bruising
- Genetic Bleeding disorders
  - Hemophilia, VWB disease, other rare
- Acquired Bleeding disorders
  - Autoimmune-ITP, TTP,
  - Infectious-DIC, Purpura fulminans
- Unknown etiology
  - HSP
- Environmental
  - Blue jeans, phytophotodermatitis
  - Dye tattoos
Straddle Injuries

- History must fit mechanism
- Usually unilateral
- External to hymen
- History of pain, bleeding and prompt seeking medical attention

Insect Sting

Tick bite with associated swelling of the scrotum in a young boy

http://www.pediatricurologybook.com

Summary

The evaluation of dermatologic anogenital lesions is a challenging problem. The differential diagnosis includes a spectrum of traumatic, infectious, autoimmune, neoplastic and genetic disorders. A systematic approach is essential in order to expedite the correct diagnosis.