

SKIN CONDITIONS THAT MIMIC CHILD ABUSE Quiz

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- 90% of victims of physical abuse present with skin manifestations
- Evidence of psycho social problems frequently introduces a bias towards diagnosis of abuse
- Under diagnosis of abuse has catastrophic consequences for the child
- Over diagnosis - catastrophic consequences for parents/family

Mandatory reporting – non abusive skin conditions may be reported due to

- Ignorance
- Rare conditions
- Uncommon presentations of common conditions

Birthmarks: Congenital dermal melanocytosis



- > 90% SE Asians, 80 % other Asians, Africans, 50-70% Hispanics, < 10% in whites
- May appear after birth in first few weeks
- Fade by 3yr may persist longer
- Looks like bruises to the untrained eye
- No swelling or tenderness
- Unchanged over days

Birthmarks



- Haemangioma and stork marks have been mistaken for bruises and pinch marks caused by abuse

Chapter 37 Vascular lesions of the orbit. Volume 2.
Duane's Clinical Ophthalmology

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Birthmarks

- Ulcerated vulval haemangioma
- May be mistaken for burns

dermatlas.med.jhmi.edu

Cutaneous mastocytosis

- Any number, any size, yellow tan to red brown
- Pruritic macules, papules, nodules, plaques, blisters, bullae
- More on trunk than limbs, spares face, scalp, palms and soles
- **Darier sign** - surrounding wheal and erythema on rubbing
- Systemic symptoms - flushing, headache, dyspnoea, rhinorrhoea, wheezing, vomiting, diarrhoea, syncope- exposure to certain drugs or foods
- 75% occur in infancy and childhood and resolve by puberty

Cultural practices: cupping

- Middle Eastern, E European, Asian, S American
- Circular bruises/petechiae/burns on back
- Cotton soaked in alcohol placed in cup, ignited and removed
- Cup placed on skin
- Heated air in cup contracts and sucks up skin, burning and bruising the skin

- Cerebral infarcts and cerebral oedema on CT brain
- Baby has bilateral retinal haemorrhages
- Is it Shaken baby syndrome?
- What else could it be?

- Pediatrics 1997; 11: 4 pp e6

Genetic disorders

Incontinentia pigmenti

- Genodermatosis, X linked dominant, variable expression
- Lesions form a pattern along Blaschko's lines
- Stage 1- first 6 w, inflammatory phase - vesicles on erythema- may look like burns, impetigo, herpes simplex or epidermolysis bullosa- raised WCC and eosinophils
- Stage 2 -a few mo - verrucous plaques
- Stage 3 - most characteristic – localized/ extensive, whorls – trunk, streaks on extremities, may fade during childhood/adolescence, flares of vesiculopustular and verrucous lesions occur
- Stage 4 - 14% and 28% have hypopigmented and atrophic streaks in adulthood
- CNS changes, eye cataracts, strabismus, retinal vascular changes etc

Cultural practices - coining



- SE Asian “Cao Gio”-scratch the wind
- For fever, headache, chills
- Oiled skin is rubbed firmly with edge of coin causing linear bruises
- Severe burns have been reported when oil on the skin caught fire

Genetic disorders

Congenital insensitivity to pain

- Presents from neonatal period to 10 y
- Tongue/lip biting, multiple skin wounds, fractures, deformities, autoamputation of fingers/toes
- Decubitus ulcers, osteomyelitis
- Fever from anhidrosis
- Variable sensory loss more distal
- Loss of pain sensation, occasionally temperature, vibration, proprioception sensation
- ID may be present

- Past Hx and family history of bleeding tendencies
- Clotting profile
- Haemophilia

Neuroblastoma



- Urine catecholamines-VMA and HVA
- Most common extracranial solid tumour of childhood
- 2/3rds have metastatic disease on presentation
- Presentation with periorbital ecchymosis with or without proptosis (from orbital metastasis) may mimic abuse
- Bone metastasis is multiple symmetric and metaphyseal
- CT brain can show necrosis, haemorrhage and calcification

Erythema nodosum

- Idiopathic, infections (TB, strep, mycoplasma), systemic (sarcoid, IBD), drugs (sulphas, OC)
- In children infection is most common cause
- >in females
- Hypersensitivity-panniculitis inflammation of SC fat
- Smooth, red, painful nodules, 2-6 cm, coalesce, continue to appear for 3-6 w
- Anterior surface of legs, thighs, and forearms
- Fever, arthralgia may occur
- As it heals may become yellowish and look like bruises may desquamate
- Infection - heal in 7 w may last up to 18 w, idiopathic - last 6 mo

Popsicle (cold) panniculitis

- Aunt had given him popsicles to help with teething pain
- Benign cold induced subcutaneous fat necrosis on cheeks of young infants
- Occurs 1-3 days after cold exposure
- Localised, indurated nodules, ill defined margins, cold, and painful
- Self limiting disorder, symptomatic relief

- FBE, Blood Film, Clotting profile
- Immune Thrombocytopenic Purpura

Bleeding/Oncological Disorders-Assessment



- Bruises in children with Factors VIII, IX, XIII, Von Willebrand disease, Platelet function problems, ITP, leukaemia, neuroblastoma have been mistaken for child abuse
- Past Hx: cephalohaematoma, umbilical stump bleed, bleed after IM injections; easy bruising, gum bleeds and epistaxis (thrombocytopenia, VWD, platelet disorder)
- Significant haemostatic challenge: circumcision, tonsillectomy, removal of teeth, bitten tongue, wound needing sutures, menses
- Family history

Bleeding/Oncological Disorders-Assessment

- Hx/interpretation of injury is important; if the bruise has a pattern it is NAI even if the child has a bleeding disorder
- Note finger tip bruises can be seen in children with bleeding disorders
- Are there petechiae?
- Distribution of bruises/ bleeds, bleeding in joints

Bleeding/Oncological Disorders-Assessment

Investigations:

- FBE, blood film
- PT, APTT
- Thrombin time
- Fibrinogen
- Factor VIII, IX, XIII
- VW screen, Blood Group
- PFA100

Hypersensitivity/Vasculitis

- Acute haemorrhagic oedema of infancy (picture on the left)
- Henoch Schonlein purpura (right)

Cultural practices - salting

- Application of salt to skin-Turkish custom to improve complexion
- Can result in epidermolysis (looks like burns) and hypernatremia

Hypersensitivity/Vasculitis

Urticarial vasculitis



- *Eruption associated with burning pain*
- Generalized/localized wheals or plaques with central clearing
- Petechiae within lesion and resolve with bruises or post inflammatory hyperpigmentation
- Lasts > 24 hr in a fixed location unlike urticaria which migrates in minutes to hours
- Photosensitivity, arthralgia, angioedema, fever, dyspnoea, abdominal pain, pleural/pericardial effusions
- Most idiopathic
- Drugs: penicillin, sulphas, fluoxetine, NSAID
- Autoimmune disease SLE, Sjogren's
- Malignancies
- Infections: Hep B, Hep C, IM

Hypersensitivity/Vasculitis Phytophotodermatitis

Limes/Lemons/Oranges
Celery
Grasses
Parsley
Parsnips
Sagebrush
Goldenrod
Chrysanthemum
Ragweed
Cocklebur
Tobacco
Figs
Garlic
Hot peppers



Phytophotodermatitis

- Temporal exposure with phototoxic furocoumarins in some plants and UVA 320-380 nm = phototoxic skin eruption
- Begins 24 h after exposure peaks at 48 -72 h
- Burning sensation - erythema and blisters, look like burns, followed by pigmentation, may look like bruises
- Prior sensitisation is not required
- Bizarre patterns may be seen
- Has been mistaken for abuse when finger impressions patterns are seen as carer touches child after handling the plant material

Pernio/Chilblains

- 12-24 hr after exposure to non freezing, damp, cold
- Single/multiple, red purplish, oedematous lesions, turn yellowish brown, with desquamation
- Intense pain, burning, itching
- Toes/fingers, dorsum of proximal phalanges, pinnae, cheeks, nose, thighs
- Circulation normal
- Excessive cold, neglect, anorexia nervosa, presence of cryoproteins, SLE, presence of anticardiolipin/antiphospholipid antibodies

Cultural practices - spooning

- In China called “quat sha”
- Wet skin rubbed with porcelain spoon to cause bruising

- **Pseudo -Ainhum-**
from congenital
constricting
amniotic bands
- Ainhum-idiopathic
fibrotic band
develops after
minor trauma,
common in blacks in
tropics, leads to
autoamputation
- **Hair tourniquet**
not uncommon in
babies
- To be differentiated
from **intentional
banding**

Cultural practices - moxibustion



- SE Asian
- Burning of moxa (mugwort or *Artemesia vulgaris*) or yarn on skin
- Pattern of small discrete circular burns can look like cigarette burns

Impetigo v Cigarette burns

- Impetigo, yellow crust, different sized, spreading
- Cigarette burns may vary from circular bullae to deep punched out craters with raised edges, 8mm in size, centre of burn deepest.
- If same cigarette is used the lesions will be the same size

Laxative-Senna induced dermatitis

- Senna can cause severe nappy rash and in overdose situations in children wearing nappies can cause a blistering rash which looks like scalds
- Can be used by defence, so document exclusion of laxative use in children with scalds in buttock/genital area

Congenital syphilis

- Widespread polymorphic rashes, involves palms and soles
- Infants with CS may have extra cutaneous findings such as: low birth weight, hepatosplenomegaly, jaundice, thrombocytopenia, anaemia, respiratory distress, osteochondritis, hydrops fetalis, meningitis, chorioretinitis, pseudo paralysis.
- Older infants may present with "snuffles" which, in the early stages, may be mistaken for an upper respiratory tract infection.

Loose Anagen syndrome

- > in girls 2-5 yr
- anagen hairs, easily and painlessly plucked,
- Hair is thin, dry, dull and unmanageable
- does not grow beyond nape of neck
- child otherwise healthy, rest of body hair not involved, teeth and nails normal.
- DD: Alopecia areata, Trichotillomania, traction alopecia, telogen effluvium, tinea capitis

Sudden Death

- Child with Perianal red indurated lesions referred for sexual abuse exam. Swab does not grow *Streptococcus pyogenes*. What else could it be?

- Perianal Langerhans Cells Histiocytosis