Pay attention to the children around you. Child abuse is everyone's business!
Recognising and Managing Child Abuse
DCH Lectures 2015

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Child Abuse Team
Red Cross Children’s Hospital
Outline

• Definition
• Importance of Child Abuse
• Common presentations of possible physical abuse
  - Bruises
  - Fractures
  - Shaken Baby Syndrome
  - Burns
  - Neglect
• Aspects of care related to possible sexual assault
What is child abuse?

physical abuse
emotional ill-treatment
sexual abuse
neglect
negligent treatment
and
exploitation of children
Why is child abuse important?
What are our legal obligations?

Children’s Act 38 of 2005
(as amended by the Children’s Amendment Act 41 of 2007)

“who on reasonable grounds concludes that a child has been abused in a manner causing physical injury, sexual abuse or deliberate neglect”
How do we make the diagnosis of child abuse and neglect?
There are certain Risk Factors that can help

- Parent Characteristics
- Family Characteristics
- Child Characteristics
- Parent/child relationship
- Environmental
There are certain Indicators that can help

• Positive disclosure
• History
• Suspicious behaviour
• Examination
Common presentations of Physical Abuse

- Bruises
- Fractures
- Inflicted Head Injury
- Shaken Baby syndrome
- Burns
- General neglect
1. Bruising
Red Flags

• Injury not compatible with explanation
  - Mechanism
  - Amount of force
  - Age/developmental

• Injuries of different ages

• Unusual site of a bruise

• Patterned Bruise
Caution
2. Fractures
Red Flags

- Injury not compatible with explanation
  - Mechanism
  - Amount of force
  - Age/development

- Recurrent incidents of trauma

- Injuries of different ages

- Unusual fracture locations
Rib Fractures
Metaphyseal fractures
Skull Fractures

Sick Kids Hospital

Trauma unit, RXH
Caution

a

b

c

Diagnostic Imaging in Child Abuse, Non Accidental Trauma by Simon Robben Radiology Department of the Maastricht University Hospital
Additional Imaging

a) CT Scan

Subdural haemorrhage in right parasagittal

b) MRI

New subdural hematomas in the right frontal and posterior inter-hemispheric region.

c) Skeletal Survey

R front parietal subdural haematoma
3. Shaken Baby Syndrome
Ophthalmology Review
3. Burns

<table>
<thead>
<tr>
<th>Water Temperature</th>
<th>Length of Time to Receive A Severe Burn</th>
</tr>
</thead>
<tbody>
<tr>
<td>156°</td>
<td>1 second</td>
</tr>
<tr>
<td>149°</td>
<td>2 seconds</td>
</tr>
<tr>
<td>140°</td>
<td>5 seconds</td>
</tr>
<tr>
<td>133°</td>
<td>15 seconds</td>
</tr>
<tr>
<td>127°</td>
<td>60 seconds</td>
</tr>
<tr>
<td>124°</td>
<td>3 minutes</td>
</tr>
</tbody>
</table>
Red Flags

- Age and development

- Burn characteristics
  - Usually lower limbs
  - Glove and stocking
  - Clear demarcation
  - Absence of splash marks
  - Sometimes sparing is seen

- Burn patterns
  - Cigarette
  - Iron/radiator grid
Management of possible physical abuse

- Treat the Injury
- Recognise abuse is a possibility (identify the red flags)
- Exclude the medical disorders
- Make detailed appropriate notes
- Ask for assistance
- Assess child safety
- Refer to the appropriate authorities
- Complete the J88, Form 22
- Be prepared to testify in court
How do we know if a child is being sexually assaulted?
There are certain behavioral indicators that are helpful

• Sexualized play or sexually precocious
• ‘excessive’ masturbation
• Insertion of foreign bodies
• Other: eg poor scholastic performance, overdosage or attempted suicide
Our Role

1. Take a history and perform an examination

2. Formulate an opinion

3. Completing the Documentation

4. Provide initial treatment, support, ensure the child is safe, refer appropriately and follow up
1. Genital Examination

Frog leg position

Knee chest position
Hormonal Influences

Different shapes

- Fimbriated
- Crescentic
- Annular
- Septated
- Cribiform
- Microperforate
- Imperforate
## Normal Variants

<table>
<thead>
<tr>
<th>Normal Variant</th>
<th>Frequency</th>
<th>Description</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounds</td>
<td>~ 30%</td>
<td>Rounded elevated tissue present</td>
<td></td>
</tr>
<tr>
<td>Notches</td>
<td>Common</td>
<td>But rarely extends all the way to vaginal wall. <strong>Beware between 03.00-09.00 position i.e. posterior more likely to be abnormal</strong></td>
<td></td>
</tr>
<tr>
<td>Tags</td>
<td>Common</td>
<td>Tissue extending &gt;1mm over the edge most likely septal remnants</td>
<td></td>
</tr>
<tr>
<td>Cleft</td>
<td></td>
<td><strong>IN ANTERIOR 180º</strong>&lt;br&gt;Usually at 11,12,3 or 9 o’clock</td>
<td></td>
</tr>
<tr>
<td>Support Bands</td>
<td>Common</td>
<td>At 12.00 position</td>
<td></td>
</tr>
</tbody>
</table>
2. Formulate an Opinion

1) Findings documented in newborns or commonly seen in non-abused children

2) Indeterminate findings
   These findings **may support** the child’s clear disclosure of sexual abuse but **without this** should be interpreted with caution

3) Findings diagnostic of trauma and or sexual contact

4) Findings diagnostic of sexual contact

Joyce Adams criterion 2007
Interpretation

1) Findings documented in newborns or commonly seen in non-abused children
1. Findings documented in newborns or commonly seen in non-abused children:

a) Normal variants:

- Periurethral or vestibular bands.
- Intravaginal ridges or columns.
- Hymenal bumps or mounds.
- Hymenal tags or septal remnants.
- Linea vestibularis (midline avascular area).
- Hymenal notch/cleft in the anterior (superior) half or the hymenal rim in pre-pubertal girls, on or above the 3 o’clock – 9 o’clock line.
- Shallow/superficial notch or cleft in inferior rim of hymen, below 3 o’clock – 9 o’clock line.
- External hymenal ridge.
- Congenital variants in appearance of hymen, including: crescentic, annular, redundant, septate, cribriform, microperforate, imperforate.
- Diastasis ani / smooth area in perianal midline.
- Perianal skin tag.
- Hyperpigmentation of the skin of labia minora or perianal tissues in children of colour.
- Dilatation of urethral opening with application of labial traction.
- Thickened hymen.

b) Findings commonly caused by other medical conditions:

- Erythema of vestibule, penis, scrotum or perianal tissue.
- Increased vascularity of vestibule and hymen.
- Labial adhesions.
- Vaginal discharge.
- Friability of the posterior fourchette of commissure.
- Excoriations/bleeding/vascular lesions.
- Perineal groove, partial or complete (failure of midline fusion).
- Anal fissures.
- Venous congestion or venous pooling in perianal area.
- Flattened anal folds.
- Partial or complete anal dilatation to < 2cm with or without visible stool.
Vulvovaginitis

- Vulvovaginal irritation more common
  - lack of labial fat pads and pubic hair for protection
  - labia minora tend to open when a child squats causes exposure of the sensitive tissues
  - close proximity of the anal orifice to the vagina allows transfer of faecal bacteria to the vulvovaginal area

- Relatively low estrogenic pre-pubertal
  - thin atrophic vaginal epithelium is susceptible to bacterial invasion.
Causes of vulvovaginitis in pre-pubertal children

• Physiological vaginal discharge
• Poor perineal hygiene
• Sensitivity to soaps and bubble bath
• Threadworms
• Atopic eczema
• Infection including sexually transmitted disease
• Child sexual abuse
• Foreign body
• Dermatoses
• Tumour
Interpretation

2. Indeterminate findings

(These findings may support the child’s clear disclosure of sexual abuse but without this should be interpreted with caution)
2. Indeterminate findings:

(insufficient or conflicting data from research studies)

These physical/laboratory findings **may support a child’s clear disclosure of sexual abuse**, if one is given, but should be interpreted with caution if there is no disclosure.

a) Physical examination findings:

- Deep notches or clefts in the posterior/interior rim of hymen in pre-pubertal girls, located between 4 and 8 o’clock, in contrast to transactions.
- Deep notches or complete clefts in the hymen at 3 or 9 o’clock in adolescent girls.
- Smooth, non-interrupted rim of hymen between 4 and 8 o’clock which appears to <1mm wide when examined in the prone knee-chest position or using water to “float” the edge of the hymen when the child is in the supine position.
- Wart-like lesions in the genital or anal area.
- Vesicular lesions or ulcers in the genital or anal area.
- Marked immediate anal dilatation to an anterior-posterior diameter of 2cm or more in the absence of other predisposing factors.

b) Lesions with aetiology confirmed, but indeterminate specificity for sexual transmission

- Genital or anal condyloma accuminata in child, in the absence of other indicators of abuse.
- Herpes type 1 or 2 in the genital or anal area in a child with no other indicators of sexual abuse.
Interpretation

3) Findings diagnostic of trauma and or sexual contact

- Injuries indicative of blunt force penetrating injury
  - laceration of the hymen,
  - echymosis of the hymen,
  - perianal laceration deep to anal sphincter,
  - hymenal transection,
  - missing segment of hymenal tissue in inferior

- Presence of STI infection
3. Findings diagnostic of Trauma and/or Sexual contact

These findings support a disclosure of sexual abuse if one is given. They are highly suggestive of abuse even in the absence of a disclosure, unless the child and/or caretaker provide a clear, timely plausible description of accidental injury.

a) Acute trauma to external genital/anal tissues:
   - Acute lacerations or extensive bruising of labia, penis, scrotum, perianal tissues of perineum.
   - Fresh laceration of the posterior fourchette, not involving the hymen.

b) Residual (healing) injuries:
   - Perianal scar.
   - Scar of posterior fourchette or fossa.
c) Injuries indicative of blunt force penetrating trauma:

- Laceration (tear, partial or complete) of hymen, acute.
- Ecchymosis on the hymen.
- Perianal lacerations extending deep to the external anal sphincter.
- Hymenal transection (healed). An area between 4 and 8 o’clock on the rim of the hymen where it appears to have been torn through, to or nearly to the base, so there appears to be virtually no hymenal tissue remaining in that location.
- Missing segment of hymenal tissue. An area in the poster (inferior) half of the hymen, wider than a transaction, with an absence of hymenal tissue extending to the base of the hymen.

d) Presence of infection, which confirms mucosal contact with infected bodily secretions, contact most likely to have been sexual in nature:

- Positive confirmed culture for gonorrhoea, from genital area, anus, throat, in a child outside the neonatal period
- Confirmed diagnosis of syphilis, if perinatal transmission is ruled out
- Trichomonas vaginalis in a child > 1 year of age, with organism identified by culture or in vaginal secretions by wet mounts examination
- Positive culture from genital or anal tissues for Chlamydia, if child is older than 3 years at time of diagnosis, and specimen was tested using cell culture
- Positive serology for HIV, if perinatal transmission, transmission from blood products and needle contamination has been ruled out
4) Findings diagnostic of sexual contact
A normal examination does not exclude sexual assault especially when there is a positive disclosure.
3. Complete the Documentation

- Clear documentation in patients notes Completing a J88
- Completing a form 22
- Completing the crime kit
- At RXH Completing a DRX445

*Form 22: Reporting Of Abuse or Deliberate Neglect*
www.kzneducation.gov.za/Portals/0/.../FORM%2022%20DOE.pdf

*Guidelines for the completions of the J88 form - KwaZulu-Natal *
4. Provide Initial Treatment

• Initiating PEP (AZT, 3TC and Kaletra)

• Pregnancy prophylaxis

• Bloods for HIV, VDRL

• Taking genital swabs

• Treatment of STD’s
### Pregnancy prophylaxis

<table>
<thead>
<tr>
<th>Drug</th>
<th>Ovral 28</th>
<th>Maxalon</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First dose</strong></td>
<td>2 tablets stat</td>
<td>1 tablet stat</td>
</tr>
<tr>
<td></td>
<td>(each tablet has norgestrel 500</td>
<td>(each Tblt contains 10mg</td>
</tr>
<tr>
<td></td>
<td>micrograms and ethinyl oestradiol</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 micrograms)</td>
<td></td>
</tr>
<tr>
<td><strong>Second dose</strong></td>
<td>2 tablets 12hrs after the first</td>
<td></td>
</tr>
</tbody>
</table>

If patient is on Rifampicin or anticonvulsants use 4 tablets of Ovral 28 per dose

### STI Prophylaxis/Treatment

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Drug</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gonorrhoea</strong></td>
<td>Ceftriaxone</td>
<td>&lt; 25 kgs 125mg IMI Stat&lt;br&gt; &gt; 25 kgs 250mgs IMI stat</td>
</tr>
<tr>
<td><strong>Chlamydia</strong></td>
<td>&lt; 8 years Erythromycin&lt;br&gt;</td>
<td>10-15mg/kg/dose 6hrly PO for 14 days&lt;br&gt; 100mg BD PO for 7 days Or Erythromycin as above</td>
</tr>
<tr>
<td>&gt; 8 years Doxycycline</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trichomonas Vaginalis and</strong></td>
<td>Metronidazole (Flagyl)</td>
<td>7.5mg/kg/dose PO 3 times /day for 5 days</td>
</tr>
<tr>
<td><strong>Gardnerella vaginalis</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Antiretroviral Post-Exposure Prophylaxis (PEP) After Acute Sexual Assault in Children (2012)

**Sexually assaulted child**
- Pretest counsel caregiver and/or child & obtain consent for HIV testing
- Abbott Determine® HIV rapid test
  - Determine® test negative = HIV uninfected (if no breastfeeding in last 6 wks)
  - Determine® test positive = ‘HIV-exposed’ if <18mths of age
    - HIV-infected if >18mths of age
- Start 3-drug PEP if assaulted <72hrs ago

- <18 mths of age
  - Send HIV DNA PCR test
  - Start 3-drug PEP if assaulted <72hrs ago
- >18 mths of age
  - Send confirmatory HIV ELISA test
  - No PEP

Review at Infectious Diseases Clinic with PCR test result & follow up accordingly

**Notes**
1. Consent for HIV testing in children (Children’s Act, 2005)
   - Children <12 years (unless they are of sufficient maturity to understand the benefits, risks, and social implications of the test results themselves) require the consent of their parent or primary caregiver (i.e. does not have to be legal guardian, but the person who cares for the child).
   - Children ≥12 years can provide consent to be tested; they must also provide written consent if disclosure of their test result to anyone else is necessary.
   - Whoever consents must get pre and post test counseling by an appropriately trained person.
2. At present, the only HIV rapid test that has been validated for use in children is the Abbott Determine® HIV 1/2 test. At RCCH, these tests are performed at the Haematology Lab. (24 hrs)
3. 3-drug PEP is AZT+3TC+lopinavir/ritonavir (Kaletra® or Aluvia®) taken for 28 days (dose acc. to weight bands in chart opposite). PEP starting >72hrs after assault is not recommended.
4. For HIV DNA PCR test or HIV ELISA test send 0.5 ml blood in purple-top tube to laboratory.
5. If HIV uninfected at baseline, repeat HIV testing at 6 weeks, 3 months & 6 months after assault. Full blood count should be done at baseline, 2 weeks & 4 weeks to monitor for AZT-induced anemia.

**Drug**
- **Zidovudine (AZT)**
  - Target dose: 180-240mg/m²/dose TWICE daily (bd)
  - Available formulations: Solution 10mg/ml Capsules 100mg Tablets 300mg

- **Lamivudine (3TC)**
  - Target dose: 4mg/kg/dose TWICE daily (bd)
  - Available formulations: Solution 10mg/ml Tablets 150mg

- **Lopinavir/ritonavir (LPV/riv)**
  - Target dose: 300/75mg/m²/dose LPV/riv TWICE daily (bd)
  - Available formulations: Solution 80/20mg/ml Tablets 100/25mg, 200/50mg

**Wt. band (kg)**
- Currently available tablet formulations of AZT & LPV/riv are film-coated and must be swallowed whole and NOT chewed, divided or crushed
- <3 Consult with a clinician experienced in paediatric ARV prescribing
- 3-3.9 6ml bd
- 4-4.9 8ml bd
- 5-5.9 9ml bd
- 6-6.9 10ml bd
- 7-7.9 1 cap bd OR 12 ml bd
- 8-9.9 1 cap bd OR 15 ml bd
- 10-13.9 2 cap bd OR 20 ml bd
- 14-19.9 2 cap bd OR 15 ml bd
- 20-24.9 2 cap bd OR 20 ml bd
- 25-29.9 AZT 300mg + 3TC 150mg fixed dose combination tablet:
  - 1 tab TWICE daily
  - OR 1/2 cap bd TWICE daily OR 100/25mg tabs: 2 tabs bd
  - OR 3 cap bd OR 100/25mg tabs: 3 tabs bd
  - OR 4 cap bd OR 100/25mg tabs: 3 tabs bd
  - OR 100/25mg tabs: 5 tab bd

**Dosing instructions & potential side-effects**
- **AZT:** oral solution may be stored at room temperature, administer with or without food, capsules may be opened and powder contents dispersed in water or mixed with a small amount of food (e.g. yoghurt) and immediately ingested. Adverse effects include anemia, headache, elevated liver enzymes.
- **3TC:** oral solution may be stored at room temperature, administer with or without food, tablets are scored and can be easily divided, may be crushed and mixed with a small amount of water or food and immediately ingested. Adverse effects are unusual.
- **Lopinavir/ritonavir (Kaletra® or Aluvia®):** Solution should be taken with food as increases absorption. Solution can be stored at room temperature (<25°C) for 6 weeks. May need techniques to increase tolerance & palatability: coat mouth with peanut butter, dull taste buds with ice, follow dose with sweet foods. Tablets must not be divided or crushed; swallow whole with or without food. Many drug interactions due to RTV inhibition of cytochrome p450. Adverse effects may include diarrhoea, headache, nausea, vomiting, rash, pancreatitis, elevated liver enzymes.

Compiled by J. Nuttall, S. Raiman, Red Cross Children’s Hospital, Cape Town
Follow-up

- 2 weeks, 1 month, 3 months and 6 month
- FBC at 2 weeks
- VDRL and HIV at 1mnth
- PTSD symptoms
- Progress of Case
- Confirm safety plans
- Providing family support
Neglect
Prevention

• Provide support to decrease the risk factors
• Address domestic violence and substance abuse
• Improve supervision and provide safe recreation
• Improve our social development and correctional services
• Education
Summary

• Definition

• Importance of Child Abuse

• Common physical abuse presentations
  - Bruises
  - Fractures
  - Shaken Baby Syndrome
  - Burns
  - Neglect

• Aspect of care related to possible sexual assault
Children are the world's most valuable resource and its best hope for the future

http://newsimg.bbc.co.uk/media/images/41111000/jpg/_41111356_13_beninpeeter.jpg

John Kennedy