S.N.A.T.
Suspected Non-Accidental Trauma

Community Medicine Rotation
Objectives

- Understand the process of working up a SNAT case
- Understand what goes on “behind the scenes”
- Know what to do when you are out of the shelter of the hospital system
- Know who we (Forensics team) are and what our role is
- Have a general idea of what to ask and what to do
Scenarios
Scenario 1: PCP, private office

3:30 pm: 2 m.o. male new patient well check. No concerns, normal feeding and developmental history, normal birth history. On exam, you notice a 1-cm yellow-blue mark on the right mandible and 2 1-cm yellow-blue marks left mandible. The rest of your exam is normal. Are you concerned? If so, what is your next step?
Scenario 2: PCP, hospital based clinic

5 y.o. female who lives in Mesa is brought in for dysuria, but mom is really concerned about behavior changes around potty time ever since she started at a new babysitter in Gilbert. Exam is normal and urine is clean.

What other information do you need?

Whom do you call if it is 9am?

Whom do you call if it is 6pm?
Scenario 3: Urgent care facility

8 m.o. male in for right leg pain injury sustained while the rambunctious 3 y.o. sibling was playing with the baby. XR shows oblique fracture at midshaft right femur.

Are you concerned? If so, why? What do you do next?
Scenario 4: Emergency Department

2 m.o. female, fussy since her last feeding at 6pm. At 9pm, while sleeping in the infant carrier that was placed on the couch, she woke up and started fussing again, then rocked herself out of the infant carrier and the carrier fell on the baby. She seemed fine—immediate cry, no LOC, no visible injuries—but refused a bottle, so they put her to bed. They woke her up at 1am, she vomited once and was still too sleepy to take a bottle so they brought her in.

What about this story concerns you?
What is your next step?
What studies do you want to order?
Scenario 5:
Admitting team, pediatric ward

8m.o. male admitted to the floor through the ED for “fussiness” and rule out sepsis. UDS is + for amphetamines, the rest of the work-up is normal.

What else do you want to know?
What is your next step?
Whom do you call now?
What do you do next?
What’s your role?
i.e. where are you seeing the patient?

- PCP, private practice
- PCP, hospital-based clinic
- Urgent care physician
- ED physician
- Hospitalist/ward team
- Forensics team
What’s your responsibility?
Depends on your role, but for all of us:

- *Think about it*
- Investigate the story
- Evaluate the patient
- Assess the entire clinical picture
- Record everything
- Report

To varying degrees of detail, depending on the probable next step (*).
Mandated reporting

- All health care providers in AZ
- *Suspicion* only
- Both CPS and Police report
- Even if social work is handling the report, follow up because it is OUR responsibility that the proper agencies have been notified
- The child’s safety is our first priority: no discharge if the possible perpetrator has access to the child
Probable next steps

- PCP, UC
  - Police/CPS report in office/facility
  - Transfer to higher level of care
- Hospital clinic
  - SWK consult (if available), transfer
- ED
  - SWK consult, police, CPS, admit
- Hospital ward
  - Forensics team consult
Keep in mind . . .

- How many people are asking for the story
  - PCP/UC → ED triage RN → ED resident → ED fellow → ED attending → SWK → PD → CPS → PICU/Floor RN → Admitting intern → Admitting senior → Admitting attending → Forensics team
Reporting
Call ASAP because the whole reporting process can take hours

Notify the parents that SWK will come in to talk with them, but be as vague as possible
  - Too much information “contaminates” the social worker’s interview
  - Disclosure of suspicions can create hostility

SWK will contact police and CPS
Cases are reported to the department of the jurisdiction where the alleged incident occurred.

Responding officer may be a patrol officer or a detective from the child crimes unit.

Brief interview, photographs (police-issued camera therefore standardized), arrangements for forensic interviews (polygraph, voice stress, etc.), assignment of child crimes detective if patrol officer responds.

Case is assigned to homicide if the child dies.
CPS

- CPS Hotline (602)530-1800 OR 1-888-SOS-CHILD for all of AZ state, staffed by CPS workers
- Information taken from the reporter
- Case taken and assigned *or*
- Taken as “info only” (no one is dispatched)
  - e.g. “underage” mom with “overage” dad; pt to be admitted
- If after-hours, only the highest priority cases are assigned to the after-hours team—e.g. stable for DC but unsafe at home
Forensics team

- PCH Forensics team:
  - Stephanie Zimmerman, MD (ED attg)
  - Tamara Pottker, MD (ED attg)
  - Jennifer Geyer, MD (Fast track attg)
  - Wendy Arafiles, MD (Fast track attg)
  - Amy Terreros, PNP
  - Rebecca Marianetti, MSW
Forensics team, cont’d

- Anyone can consult the team (docs, nurses, social workers, etc.)
- 24/7 on-call coverage
- Consult the team ASAP
- Staffing meetings every Friday at noon with:
  - CPS workers for the cases +/- supervisors
  - Police, FBI (reservation cases)
  - Maricopa county attorney
- No sexual abuse yet
Child Help

- Completely different set of staff
- Contracted mostly with SJH, but occasionally see patients at MMC
  - No privileges at PCH
- Free-standing facility with Phoenix PD child crimes unit and CPS office in the building
Advocacy centers

- [http://www.parent-wise.org/acfan/find.htm](http://www.parent-wise.org/acfan/find.htm)
- Free-standing, independent facilities for evaluation of family violence and sexual assault
  - Usually MD, NP, or SANE nurse conducting medical portion
  - Law enforcement unit(s) often stationed in the building
  - ChildHelp is an example of an advocacy center
- Multiple locations spread throughout the state
- By appointment or referral only, but all patient populations are served
When do you report?
What makes you suspect it?

In general:

- Changing or non-sensical explanations
- Vague or no explanation
- Story inconsistent with injury
- Story inconsistent with developmental capacity of the child
- Delay in obtaining medical care
- Highly suspicious injuries (*)
- High risk situations (*)
Highly suspicious injuries

- **Bruising**
  - Pattern, facial, abdominal, non-contact areas, non-mobile children

- **Fractures**
  - Metaphyseal, femur, rib, *non-supracondylar* humerus

- **Burns**
  - Pattern, deep, young infants
High-risk situations

- Extreme emotional stress or burdens on caregiver
  - Ask about discipline, coping mechanisms, respite opportunities
- Children with disabilities, behavioral or psychiatric problems
- Domestic violence
- Substance use/abuse
What makes you suspect it?
Child’s behaviors:

- Unusually fearful or withdrawn
- Unusually friendly or trusting
- Abusive interactions with younger siblings
- Seductive behavior or sexual verbalizations
What makes you suspect it?

Adult’s behaviors:

- Lack of concern or excessive concern over minor injuries
- Vague, evasive answers
- Blushing, tears, inappropriate anger, or attempts to block out bad news
- Accusations (killer couches, vicious pets, brutal 3 y.o. siblings)
- Evidence of intoxication
- Reluctance to allow spouse to be interviewed alone
- Caretaker not with child on presentation
What happens next?
Behind the scenes

- Outside the hospital:
  - PD responds and interviews family at the facility or at the home
  - +/- CPS worker visit

- In the ED:
  - SWK interviews first, then calls PD and CPS
  - PD and/or CPS respond

- On the ward:
  - Forensics team SWK responds first, then discusses with the team
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Getting the history

- Office, Clinic, UC
  - Just enough to determine disposition
  - Detailed hx if medically safe for DC
- ED, Ward
  - Enough detail to satisfy H&P
- Forensics team
  - LOTS of detail
Evaluating the scene

- Compare all versions of the history
- Discuss any inconsistencies uncovered
- Consult with the PCP
- Review all films with a radiologist
- Discuss with SWK
- Be aware of CPS and PD status
- Be aware of legal involvement
Diagnostic evaluation

- Laboratory tests depend on the injury
  - CBC and coagulation studies for bruising
  - Chemistries including pancreatic and liver function for abdominal trauma
  - Cultures of the bases of burn injuries
- Sexual assault kit: we don’t do them here
  - If there is an immediate need for an exam, police and SWK will arrange a visit to an advocacy center
Imaging

- **Skeletal survey**
  - Mandatory in all children <2yo
  - Little value in children >5yo
  - Case-dependent if 2-5yo
  - Follow-up skeletal survey in 2 weeks increases the diagnostic yield

- **Bone scan**
  - Limited data on sensitivity in this setting
  - Requires sedation, more expensive
  - Useful as an adjunct
Imaging

CT: modality of choice for ED
- Non-contrast head CT mandatory to evaluate for intracranial hemorrhage
- CT with IV contrast (± PO) for suspected thoracoabdominal trauma

MRI: modality of choice for stable admitted patient
- Best modality to assess extra-axial and intraparenchymal injury
- Should be delayed 5-7 days in acutely ill children to increase yield
- Highest sensitivity and specificity for subacute and chronic injury
Other imaging

- Cranial ultrasound
  - Small role in the evaluation of young infants, macrocephaly, or further evaluation of a large cerebral convexity collection
  - Used in conjunction with CT or MRI

- Abdominal ultrasound and/or UGI series
  - Useful in the evaluation and follow-up of thoracoabdominal trauma
Pearls

- Minor injuries are common
  - Parents may recall a minor incident prior to the hospitalization and offer that as the obvious explanation

- Unusual things CAN happen
  - Always question an improbable history, but . . .
  - Do not automatically disbelieve a story because it seems strange.
Accidental injuries usually occur around other people

- Intentional injuries usually occur with an adult is alone with the child

Underlying medical conditions may or may not be associated with the injury

- Remain open to alternative explanations and investigate them appropriately
Red Flags

- Blame
  - the parent is accusatory
  - multiple individuals are accused and none of them are adults in the immediate family
- Male caretaker (especially non-biological) alone with child
- The child has been seen by multiple PCPs in the past for various injuries
Regardless of who or where you are . . .

- Always think about child abuse
- Know what to look and listen for, in general
- Know how to get more useful information
- Know whom to call for assistance
References

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