Critique PREP 1: Preferred Response: C

The differential diagnosis of the irritable infant is extensive and includes conditions that affect all organ systems (Item C144A). The evaluation should be based on a complete history and physical examination as well as a high index of suspicion for serious occult causes. For the patient described in the vignette, the concern should be high for nonaccidental head injury, despite the lack of trauma history or external or cutaneous findings on physical examination, and should prompt the physician to obtain neuroimaging (eg, computed tomography scan or magnetic resonance imaging). Of note, recent studies have reconfirmed the incidence of occult head injuries and the importance of neuroimaging in the evaluation of suspected child abuse. Almost 30% of children undergoing child abuse evaluation in one study had occult brain injury despite the absence of neurologic symptoms, and as many as 10% of brain injuries may be missed if only skeletal surveys and ophthalmologic examinations are performed.

The presenting signs and symptoms of nonaccidental head trauma due to inflicted traumatic brain injury (also known as "shaken baby syndrome") often are nonspecific. It is estimated that as many of 30% of cases are not diagnosed initially, in part because the findings may be attributed to other conditions, such as viral syndrome, colic, or formula intolerance. The history also may be misleading, with most caretakers reporting no trauma. In some instances, the sole finding may be a disproportionately large head circumference.

The absence of external findings is related largely to the biomechanics of the injurious event. Vigorous shaking, with or without impact, leads to traction on the dural bridging veins. Shearing of these veins causes bleeding into the subdural space (Item C144B). Especially in those cases where there was no impact of the infant's head during the shaking episode, bruising or swelling is likely to be absent.

Abdominal ultrasonography to evaluate for intussusception or hydronephrosis, serum ammonia and urine organic acid determinations to evaluate for metabolic errors, or chest radiography to look for cardiomegaly or pulmonary infiltrates may be indicated in the evaluation of the irritable infant. However, in contrast to abusive head trauma, it is likely that signs, symptoms, or abnormalities on screening laboratory evaluations would provide clues to these other diagnoses.

References:

Critique PREP 2: Preferred Response: C
Whenever child abuse is suspected, it is critical for the clinician to evaluate the child fully for any and all potential manifestations of such abuse. The evaluation begins with a thorough trauma history and social history, paying close attention to the child-parent interaction, and a complete physical examination. When bruises or other lesions are present, or the history is inconsistent with the mechanism of action for the lesions, child abuse should be strongly suspected, and further evaluation is required. Such evaluation includes a complete skeletal survey to look for fractures.

A skeletal survey consists of radiographs of the skull, lateral cervical spine, ribs, pelvis, thoracolumbar spine, arms, hands, legs, and feet. Anteroposterior and lateral views should be obtained to examine all aspects of the bones fully. A skeletal survey can provide information about the age of a fracture, although some fractures, such as those of the ribs, may not be recognized early. A repeat survey 2 weeks later can be helpful to identify healing fractures that exhibit new bone formation.

Certain types of fractures have a high specificity for nonaccidental trauma. Among the most specific are metaphyseal chip fractures (Item C179A) and metaphyseal bucket handle fractures (Item C179B), both of which are seen in children younger than 1 year of age. Other concerning findings include fractures of the posterior ribs (Item C179C), scapula, spinous process, and sternum as well as multiple fractures, fractures of different ages, femur fractures in children younger than 1 year of age (Item C179D), and complex skull fractures.

Common skeletal survey findings that have a low specificity for child abuse include simple linear skull fractures, nondisplaced long bone fractures, and subperiosteal new bone formation. A nondisplaced spiral fracture of the tibia, also known as a "toddler's fracture" (Item C179E), is the result of a twisting motion of the tibia and can occur in young children who have just learned to walk. Even in these types of fractures, however, it is important to obtain a complete trauma history. If the history is inconsistent with the injury, a full evaluation for nonaccidental trauma is indicated. Further evaluation includes imaging of the head (either computed tomography scan or magnetic resonance imaging) to look for hematomas, ophthalmologic examination to look for retinal hemorrhages (Item C179F), and urinalysis and liver and pancreatic enzyme measurement to look for evidence of blunt abdominal trauma. Any suspicious findings warrant mandatory reporting to child protective services.

References:

Critique PREP 3: Preferred Response: E

Bruises on the back (Item C244), abdomen, and flexor surfaces in various stages of healing, as reported for the child in the vignette, are suspicious for nonaccidental trauma. Thus, the child should undergo a bone survey to look for occult fractures. Bruising in older infants and toddlers often results from the combination of increasing mobility and developing coordination and stability. However, bruising that relates to falls associated with creeping, crawling, cruising, and early walking is seen primarily on the front of the body, especially on the forehead, forearms, and pretibial areas of the legs, where the child "meets" obstacles in the environment.

The appearance of a bruise depends on its age, location, and depth as well as the child's
skin pigmentation. A review of the literature about "dating" bruises in children reveals that a
bruise may appear red, blue, or purple at any time from onset to resolution but often contains
yellow discoloration after 18 hours from onset. However, even multiple bruises resulting from the
same injury at the same time in the same person may "age" differently, so it may be difficult to
age bruises accurately.

Coagulation disorders such as hemophilia and von Willebrand disease may present with
bruising but often are associated with other physical findings and a history of mucosal bleeding.
Studies that can assess for a coagulation disorder, such as measuring prothrombin time, partial
thromboplastin time, von Willebrand factor, and factor VIII, are unlikely to yield positive results for
the child described in the vignette.

In the absence of signs of head contusion, irritability, focal neurologic signs, or
developmental delay, computed tomography scan of the brain is unlikely to be helpful and would
result in unnecessary exposure to ionizing radiation. Although not specifically addressed in this
vignette, some recommend evaluation for possible soft-tissue injury, including renal, hepatic, and
splenic contusions or laceration, with abdominal ultrasonography. Minor elevations in liver
enzymes and microscopic hematuria may be found with less severe injury. Ophthalmologic
examination may detect retinal hemorrhages, which indicates a potential need for brain imaging,
preferably with magnetic resonance imaging in a neurologically stable child.

Evaluation of the family and caretaker systems by social services and possibly a report for
evaluation by child protective services is clearly indicated when possible child abuse is
suspected. Development of a safety plan may improve the outcome for women who are in
abusive relationships with domestic partners, which is a risk factor for child abuse, and
decrease episodes of violence, at least in the short term.

References:
Sugar NF, Taylor JA, Feldman KW and the Puget Sound Pediatric Research Network. Bruises in

1) B – Physical abuse is perpetrated by caregivers of the child in all but a few instances. It is
usually triggered by stress coupled with a momentary loss of control in an attempt to stop a
child’s behavior that initially triggered the event. It is often seen when an attempt is made to
physically discipline a child and the forces used are too extreme. The most common physical
finding is bruising and the most common location is the face/head/neck area.

References include Phoenix Children’s Hospital report on Physical Discipline; Child Abuse and
Neglect, Carole Jenny, chapter 2

2) A – Accidental bruising occurs most commonly on bony prominences and the front of the
child. See # 16 for more.
3) a= urethral prolapse (can have many different presentations/ appearances); b= animal bite, in this case a dog bite (animal bites have more tearing injury than compression injury which is seen more in human bites; look for canine teeth piercing skin, unlike human teeth which more likely crush than pierce tissue); c= perianal strep cellulitis (responds quickly to appropriate antibiotics but will worsen unless adequately treated); d= human bite (likely an adult bite because incisor to incisor width >3cm); e= perianal bruising (resolves quickly, within days, without any treatment unlike c); f= immersion burn (this is a “stocking” distribution and highly correlated with inflicted injury); g= phytophotodermatitis from picking figs (a chemical burn caused by sequential exposure to certain species of plants containing furocoumarins and then to sunlight); h= hymenal bruise, which is very highly correlated with vaginal penetrative trauma and is not seen with accidental injury except in very unusual impalement injuries.

4) A - Penetrating abdominal injury is rare in child abuse. The mechanism for abdominal trauma in abuse is usually blunt force trauma directly to the abdomen (kicking, punching) and is associated with both solid and hollow organ injuries, most commonly affecting the duodenum and proximal jejunum, the left lobe of the liver and the pancreas. Mesenteric injury is also common. The injuries seen in inflicted abdominal trauma are similar to those injuries seen with blunt force abdominal trauma from MVAs or handlebar injuries. However, the mortality rate from inflicted abdominal trauma (20-50% depending on the study) is much higher than that of accidental abdominal trauma (4.7%), such as in MVAs, because of delay in seeking medical care for inflicted abdominal injury. Inflicted blunt force abdominal trauma is the third leading cause of death in child maltreatment.

5) E – The American College of Radiology has set guidelines for when and how to do a skeletal survey (SS). The AAP supports the ACR guidelines and has published guidelines of their own in regards to the use of SSs. The AAP guideline can be found in the recommended reading section. At no time should a “baby-gram” be performed instead of a skeletal survey. One controversy regarding SSs is the amount of radiation children are exposed to. While this is an understandable concern, negative outcomes from exposure to SS radiation is only a theoretical risk, while death or morbidity from child maltreatment is a very real one. In the Duffy et al study (Pediatrics, 2011), of 703 SSs, 10.8% identified occult injuries. Children <6 months of age, children with an apparent life-threatening event or seizure, and children with suspected abusive head trauma had the highest rates of occult positive SS results. Of children with positive SS results, 79% had ≥1 healing fracture.

6) E – The leading cause of child maltreatment fatalities is neglect, constituting approximately 36% of the over 1500 confirmed child abuse fatalities annually. The second is abusive head trauma and third is blunt force abdominal trauma.

7) D - Pediatrics 2008;122;259-266
In this study there were several factors identified that influenced whether or not a primary care physician reported to CPS that did not have to do with the injury or case itself. These factors included their familiarity level with the patient and/or family, their relationship with the family, knowledge about previous CPS involvement, anticipated outcome of CPS intervention (usually anticipating a negative outcome), doubts about any benefit of reporting, and use of an alternative management plan such as keeping an eye out for patterns in the future or recommending frequent follow up appointments. Despite finding themselves in a position of bearing a legal requirement to report suspicions of abuse, clinicians prefer to weigh the perceived costs and benefits of reporting a suspicion and they tend to apply lessons learned from previous experience.

8) False- Despite sometimes devastating neurotrauma, many victims of abusive head trauma will have no other outward signs of inflicted trauma. In one retrospective series describing children with abusive head injury, 54 percent had no bruising noted at initial presentation. In two retrospective series, 22 and 23 percent of children with abusive head injury also had rib fractures. Long bone fractures were reported in 23 and 29 percent of cases. In one of the reports, 4 percent of children sustained an abdominal injury.


9. C – Race and ethnicity have not been found to be a significant predictor of AHT (Sinal et al; Is Race or Ethnicity a Predictive Factor in Shaken Baby Syndrome? Child Abuse and Neglect, 2000) however, certain minorities (African-American, Hispanic) in the US are more likely to be reported to CPS. Males are slightly more likely to be victims than females. While other types of child maltreatment are lower in military families than the general population, AHT rates are twice as high for military children as the general population (North Carolina Child Advocacy Institute, 2004).

10. C - Primary traumatic head injury results from one of 2 mechanisms: 1) Contact injury is from skull deformation and requires impact or 2) inertial injury is from whole head acceleration or deceleration and this mechanism is usually rotational (head swivels on the neck) rather than straight-line. Inertial forces can be created either via forces that are transmitted through the neck (eg. whiplash injury) or by cranial impact which triggers acceleration and/or deceleration.

Examples of contact injury include:
Craniofacial bruising and soft tissue swelling
Subgaleal hemorrhage
Cephalohematoma
Skull fracture
EDH (Epidural Hematoma)
SAH (Subarachnoid Hemorrhage)
SDH (Subdural Hematoma – usually focal and/or mass effect)

Examples of inertial injury include:
Concussion
Diffuse Traumatic Axonal Injury
SDH (Subdural Hematoma – usually non-focal and thought to occur from bridging vein shearing)
Subarachnoid Hemorrhage
Brain contusion (coup-contre-coup)
Brain laceration

Concussion is an example of inertial (AKA rotational) head injury. (Ref: Chapter 39 in Child Abuse and Neglect, by Jenny)

11. D- A non contrast head CT is the recommended diagnostic study in the acute setting. It is readily available, quick, and excellent for the detection of acute intracranial hemorrhages. CT is recommended for age 2 years or younger with a suspicion of physical abuse even if there are no focal or neurologic findings. Recent articles stress the importance of a lower threshold for younger infants, particularly those younger than 3 months, because of the difficulty in clinically assessing these children and the higher incidence of clinically occult intracranial injuries. Current CT scanners can obtain a complete set of images in a matter of seconds, so patient’s total time in CT is just minutes. CT can also identify acute life-threatening conditions (ICH, cerebral edema, signs of increased ICP, and herniation) that may require immediate surgical intervention. CT is the primary imaging modality that aids in the limited dating of SDH. High signal intensity (hyperattenuating; bright) means the bleeding is acute. MRI has some advantages over CT: multiplanar imaging, increased sensitivity for detecting most ICH and parenchymal injuries, and increased detail and visual clarity. MRI is better at visualizing small extra-axial hemorrhage over the convexities, subfrontal and subtemporal areas, and in the posterior fossa and some subarachnoid clots. Also, DWI (diffuse weighted imaging) can better detect extent of parenchymal abnormalities. However, MRI is less available than CT especially in the acute setting, requires longer imaging times and sedation, and there is greater difficulty in monitoring acutely injured, unstable patients. It is also recommended to obtain a skeletal survey and baseline labwork. If the skeletal survey is negative and obtained prior to the head CT, it’s tempting to forego the CT study however, in children <2y, it is not acceptable to forego a head CT study due to the risk of occult head injury. Dilated eye exam should be arranged with a
pediatric ophthalmologist familiar with the necessary documentation required for an abuse eye exam, but this study can wait until the child is neurologically stable.

12. D – Reference is Jenny et al, Analysis of missed cases of abusive head trauma, JAMA, 1999. This study is highly recommended reading for all pediatric residents. This study showed how inadequately physicians were identifying trauma and the consequences of this failure; 31% of abused children with head injuries were seen by physicians after the head injury occurred and the diagnosis was not recognized. AHT was more likely not recognized if the child was Caucasian, from an intact family, and child did not present with seizures or respiratory distress. Almost 28% of the children in the study were re-injured after the missed diagnosis.

13. A – Chapter 47, Child Abuse and Neglect. There are well known “mimics” of AHT in medical literature. However, most of these diagnoses are very rare and include Factor XIII deficiency, Menkes disease, GA-1, severe vitamin K deficiency. Detailed medical histories and lab work can rule out these diagnoses easily. BEAFI is a more common entity but it has unique features on head CT and a skilled radiologist can differentiate BEAFI from AHT easily.

14. E – Falling down the stairs is a common explanation given by abusive caregivers to explain a child’s injuries when they present for medical care. Because of this, multiple studies have looked closely at the types of injuries that are seen with real stair fall scenarios. One study by Huntimer (2000) looked at whether bowel perforation was a possible injury from stair falls. Huntimer looked at 312 bowel perforations and none were caused by stair falls. Huntimer then did a meta-analysis of the English language stair fall literature and found that of the 667 published cases, none had any type of intra-abdominal injury. Multiple studies have shown that children who present to the ER after a stairs fall have very low Injury Severity Scores (max score 75) with 92-96% having score between 0-2 and the highest score in any of these studies was 9. Children commonly present with only one injury, not multiple: injuries to >1 body part was seen in 0-2.7%. Injury distribution was: head/neck 73-90%, extremity 6-28%, trunk 2%. There is a significant difference in injury mechanism and outcomes between when a child falls down the stairs vs. a child is being held by an adult who falls down the stairs. Skull fractures are much more prevalent in children who are being held during the fall. Intracranial bleeds such as subdural hematomas are rare in both types of falls (0.4%). In the Joffe study (1988) researchers showed that the number of stairs involved did not affect severity of injury.

15. A – Dunstan found ear bruises in 16% of 133 children who had been abused and none of the 189 children who served as controls. Pascoe found only 1 of 196 children (1-12 yo) with accidental injury to the ear and 6% of 154 abused children had ear bruises. Langlois & Gresham (1991) identified that the color red, previously thought to represent a fresh bruise, was common in bruises of all ages. They also found that bruising color progression previously described in medical literature could not be supported scientifically. Bareciak et al (Pediatrics, 2003) asked physicians and trainees to estimate the age of a bruise and their accuracy was < 50% for both groups. Large individual variability and poor intrarater reliability also suggest that caution must be used when attempting to make estimates.
A diagnosis of abuse generally cannot be made on the basis of bruise appearance alone. A bruise must never be interpreted in isolation and must always be assessed in the context of medical and social history, developmental stage, explanation given, full clinical examination, and relevant investigations.

Patterns of bruising that are suggestive of physical child abuse:

- Bruising in children who are not independently mobile
- Bruising in babies
- Bruises that are seen away from bony prominences
- Bruises to the face, back, abdomen, arms, buttocks, ears, and hands
- Multiple bruises in clusters
- Multiple bruises of uniform shape
- Bruises that carry the imprint of implement used or a ligature

16. A – Maguire et al. Are there patterns of bruising in childhood which are diagnostic or suggestive of abuse? (Arch Dis Child, 2005): In accidental injuries, bruises were on the front of the body and they were over bony prominences in 93-100% of the cases. Bruises from abuse were more likely large, multiple (5.7-10/child) and more likely present in clusters. It is important to recognize the classic patterns of inflicted injuries with both flexible and stiff objects. In this case, the classic looped pattern is caused by impact with a flexible cord or belt. This explains the way that the marks wrap around the curved contours of the body. An infant with signs of inflicted injury/physical abuse should have a skeletal survey to look for occult skeletal trauma.

17. D - The history and physical examination suggest that this boy might have an underlying coagulation disorder/thrombocytopenia such as Idiopathic Thrombocytopenic Purpura. A careful family and past medical history should be taken in any child with manifestations of bleeding or bruising. Most children with bruises do not need comprehensive lab evaluation however it is reasonable in this case. The following historical factors should be assessed
- Family history, severity of bruises, location all important in decision to perform screening labs
- Patient History: Bruises, petechiae, hematomas, nosebleeds, hematuria, hematochezia, circumcision or cord bleeding, post T&A or other post surgical bleeding. Diet and medications are also important.
- Family History: same, plus menorrhagia, epistaxis and surgical bleeding
- Sites of bleeding that may give clues to disorders: deep tissue bruise or hematoma, joints, mucosal bleeding or poor wound healing.

A complete physical examination including genital/anal exams is indicated in all child abuse evaluations. Though there are circumstances when neuroimaging to assess for the presence of occult abusive brain injury are warranted, i.e. serious inflicted non-head injury in an infant, it is not indicated in this 5 year old boy who is asymptomatic and has a normal neurological examination.
18. B – CMLs have a high predictive value for abuse in infants <1 year old. Most CMLs occur in the first 6 months of life and it is uncommon to see these fractures after a year of age. CMLs are the fracture type most often found in fatal abuse cases. They are also called Chip fractures, Corner fractures or Bucket Handle fractures because of their appearance on radiographs. More than 50% of CMLs involve the knees – the distal femur or the proximal tibia and/or fibula. The mechanisms of injury are theorized to be either violent flailing of the limb (such as when a child is shaken violently) or a forceful tug or jerk of the extremity. In children, accidental causes of rib fractures are uncommon – in one study of 826 children with accidental fractures, only 1 child had rib fractures after a motor vehicle accident. Rib fractures from birth trauma are very rare – Bhat screen 35,000 newborns and found 0 rib fractures. Only 5 cases have been described in the medical literature and every case had a delivery complication of some sort. Rib fractures from CPR efforts are also very rare but anterior and lateral rib fractures from CPR have been described. Most rib fractures are clinically unsuspected and found incidentally on skeletal survey. In children < 3y, the presence of a rib fracture has a positive predictive value for physical abuse of 95% (Barsness et al). Scapular fractures are extremely rare and require a very high energy trauma such as high speed MVAs or falls from heights- such mechanisms should have a clear and obvious history from caregivers. Other rare fractures that require a very high energy trauma and without an adequate history are highly suspicious for abuse include sternal, vertebral and pelvic fractures. There are multiple different types of skull fractures and some are concerning for abuse while others are less so. Linear skull fractures are the most common type of skull fracture seen in children and are the most common fracture overall seen in children less than 2 years old. Linear skull fractures can be caused by short falls or falls onto a hard object or edge of an object.

Ref: Kleinman, *Diagnostic imaging of child abuse*.

19. B – This image shows an extensive liver laceration. The mechanism for this injury is blunt force abdominal trauma. In children without a significant history to explain this finding, (MVA, fall from a height, significant handlebar biking accident) this in highly concerning for abuse. Multiple studies have evaluated injuries which occur in children from falls down the stairs. When looked at together, 432 children were evaluated after falling down stairs and there were 0 cases of abdominal trauma of any type (Joffe, 1988; Chiavello, 1994). It is common to see elevated liver enzymes after even minor liver injury and some physicians advocate for AST and ALT labs in all cases of possible physical abuse to screen for occult abdominal trauma. Studies have shown that <20% of patients with abusive abdominal trauma have any bruising on examination.

20. A – See the AAP clinical report written by Nancy Kellogg entitled *Oral and Dental Aspects of Child Abuse and Neglect*.

21. D – This is a picture of failure of midline fusion and is not a finding due to trauma. When placed in situations like this scenario, it is often difficult for a physician to decide the best way to proceed. As a mandated reporter you are required to report abuse or neglect when you have reasonable concerns for these – you do not have to have “proof beyond a reasonable doubt” to report. Also, you are not required to report a parents suspicions; as a mandated
reporter you are required to report if you have personal suspicion of maltreatment. So, if after seeing this lesion you felt it was likely due to trauma it would be reasonable to report to CPS. However, if after this exam you were not sure if the lesion was a traumatic lesion or not, it is reasonable to hold off on reporting and attempt to collect more information. Photo-documentation is a great way to show the lesion to a specialist, like a provider at AFCCP, and get their input, however taking a picture of genitalia with your cell phone is not appropriate and many MTFs are creating policies to curb cell phone picture taking of patients. If your clinic had a camera dedicated to photo-documentation of medical findings or your organization had a med photo department, these would be appropriate options to document the lesion and then send the photo for a specialist’s opinion. Another option, since the lesion is not causing any problems, is to have the child return in a week. If the lesion is due to acute trauma from the past weekend with her father, you would expect it to have changed over time. If there is no change, then sexual abuse from visiting her father is less likely. (Assess for safety of the child before choosing this option.) Ob/gyns do not get much training in prepubertal genital pathology and may be uncomfortable acting as a specialist in this case. Gynecologists with specialized prepubertal training are very rare. It would not be wrong to culture this lesion, however, your decision to report or not should not be based solely on a lab value.

It is not uncommon for parents to have concerns about a child’s behavior for what the parent interprets as sexualized behavior. While some sexualized behavior can be concerning for sexual abuse, much of what adults interpret as sexualized behaviors in small children, such as humping a stuffed animal, is more commonly a self soothing behavior for the child and can be normal. These behaviors can manifest themselves when a child is under stress, such as when parents are separating or arguing frequently, as in this case. See the AAP’s Clinical Report, The Evaluation of Sexual Behaviors in Children for more information.

22) C – Children who have been sexually abused frequently do not disclose it. Because there is often little to no physical evidence of the abuse, intervention greatly depends on the disclosure (Goodman-Brown, 2003). Factors that influence a child to disclose or not include:

- Developmental level
- Gender
- Intrafamilial vs extrafamilial perpetrator
- Fear of negative consequences (punishment, threats made by perpetrator, family disruption, loyalty to the perpetrator)
- Perception of responsibility

Delayed disclosure, if a child discloses at all, is very common. Another common aspect of disclosure is recantation, especially after negative consequences of the disclosure have occurred such as family disruption, loss of the support of the non-offending caregiver (such as in this case), and multiple organizations (CPS, law enforcement) disrupting the life of the child and his/her family. Other common aspects to disclosure include partial disclosure in which the child will only disclose a portion of the abuse at his/her original outcry and slowly disclose more over time if they feel safe and supported, disclosure only after the perpetrator is out of the child’s life and the child feels safe, and disclosure to peers instead of adult authority figures.
Research shows poorer outcomes for victims with non-believing caregivers, especially significant for long term mental health, cognitive and social disruptions. False allegations of sexual abuse are rare and when it does happen it is typically initiated by an adult caregiver and not a child. The rate of child-initiated false allegations is <1%.

23. D - In the clinical presentation of drug facilitated sexual assault (DFSA), victims may present with only nonspecific symptoms such as confusion, drowsiness, or nausea. There might also be significant impairment of memory. Common features of DFSA include a victim being given a drug administered in some way without the victim’s knowledge (commonly mixed into a drink). Medical providers must have a high index of suspicion for toxicological testing in cases of abuse. Common drugs used in drug-facilitated sexual assault include

- Flunitrazepam (Rohypnol)
- Gamma hydroxybutyrate (GHB)
- Lorazepam
- Alprazolam
- Diphenhydramine
- Chloral hydrate

The amount of time that the drugs remain in the urine or blood depends on the drug ingested, the amount of drug ingested as well as the patient’s weight, size, and metabolism. Urine samples are preferable to blood samples because drug metabolites remain in the urine for a longer time than they remain in circulation. The first post-exposure urine void is typically the one most likely to be positive. Rohypnol can be detected in the blood for 4-12 hours and remains in the urine for up to 48 hours. GHB remains in the blood for 4-8 hours and can be identified in the urine for up to 12 hours. Many drugs used in DFSA cannot be identified by routine tox screens and if you are looking specifically for the common DFSA drugs you must order them specifically. Speak with your laboratory about which tests can be performed in house and which are special order and require send-out.

24. E – Causes of vaginal bleeding in prepubertal girls includes:

- Infection: Shigella, salmonella, Group A Strep, candida (less common)
  Shigella: About ½ pts present with prepubertal bleeding and no GI symptoms
  Salmonella and Shigella may cause bloody vaginitis
  Vaginitis may be the earlier or more prominent sign with only mild diarrhea
- Coagulopathies (uncommon)
- Endocrine: Precocious puberty, Hypothyroidism (less common)
- McCune Albright syndrome: peripheral precocious puberty, café-au-lait skin pigmentation and fibrous dysplasia of bone. (uncommon)
- Ovarian cyst (uncommon)
- Tumor: ovarian, vaginal, adrenal; Clear cell adenoma, Rhabdomyosarcoma, Endodermal carcinoma, Mesonephric carcinoma (all uncommon)
- Hemangioma (uncommon)
- Vulvar excoriation (very common)
• Friable genital warts (less common)
• Separation of labial adhesions (common)
• Foreign body (common)
• Lichen Sclerosis et atrophicus (common)

25. E - The growth curve described is not uncommon for breast fed children who come from lean families (genetic predisposition) and who are described as picky eaters. A thorough history is critical and should include a very thorough social and dietary history which includes some difficult questions for providers to ask, such as family financial stability, drugs of abuse in caregivers, and caregiver mental health status. Laboratory tests are often done out of concern but are seldom helpful but should be done if the wt curve continues to deteriorate. Despite a reassuring history and physical, this child will still need more frequent weight checks.

26. D - This child has chronic vomiting with FTT to the point of a G-tube. In all likelihood a neurologic cause would have become more obvious by now. Before embarking on more serious interventions such as fundoplication, it would be good to observe how the child feeds, behaves and grows both with and without the parents. The red flags in this case include receiving what appears to be excessive treatments for a diagnosis that usually is not severe or usually responds well to treatments. Also, she is the youngest of 6 children. This family deserves a closer look at the whole picture. Are the caregiver(s) overwhelmed and the child is not receiving the treatment and/or food she needs? Is this a case of Medical Child Abuse (formerly Munchausens Syndrome by Proxy)? Is this child being primarily raised by her older siblings who may not be sophisticated enough to address all of her needs? Also, a thorough review of the child’s medical records may identify some additional information. The assistance of the ward social worker and nursing staff will be a great asset to you during an admission.

27. C – Poor attachment to caregivers is a common short term finding in cases of child psychological maltreatment. The other answers listed are long-term effects of child psychological maltreatment. AAP recently published a very concise Clinical Report on Psychological Maltreatment that is a wonderful review. (Hibbard, *Pediatrics*, 2012)

28. B- All statements besides B are true in regards to MCA. In MCA, like all other forms of child abuse, the motivation of the perpetrator is not a consideration in the child’s diagnosis. In sexual abuse, for instance, the motivation of the sex abuser is not taken into consideration in making the diagnosis of child sexual abuse. The same is true for medical child abuse, although providers are commonly swept up in the question of why a parent would do such acts, which threatens their ability to make appropriate choices for their patient, the child.

29. The 3 things that are concerning in this sleep scenario are 1) infant is sleeping on his/her side, 2) infant is sleeping on a soft, fluffy surface, and 3) there are stuffed animals and blankets in the sleeping environment. All of these increase this infant’s risk for SIDS or suffocation.

30. Maternal smoking: True
    Maternal Post-Partum Depression: False
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American ancestry</td>
<td>True</td>
</tr>
<tr>
<td>Southeast Asian ancestry</td>
<td>False</td>
</tr>
<tr>
<td>Native American ancestry</td>
<td>True</td>
</tr>
<tr>
<td>Unfamiliar sleep position</td>
<td>True</td>
</tr>
<tr>
<td>GERD</td>
<td>False</td>
</tr>
<tr>
<td>Fall/winter months</td>
<td>True</td>
</tr>
<tr>
<td>Inappropriate bedding</td>
<td>True</td>
</tr>
<tr>
<td>Sleep environment too warm</td>
<td>True</td>
</tr>
<tr>
<td>DTaP vaccine</td>
<td>False</td>
</tr>
<tr>
<td>Co-sleeping</td>
<td>True</td>
</tr>
<tr>
<td>Twin or triplet</td>
<td>True</td>
</tr>
<tr>
<td>Birth weight &lt; 2500 grams</td>
<td>True</td>
</tr>
</tbody>
</table>

31. D – Ironically, in all but a few states, the state law makers are not legally required to report possible child abuse or neglect. No matter where you practice in the US, as a physician you are required to report any reasonable suspicion of child maltreatment. Not doing so can be reported to your state medical board and your license to practice could be revoked. In the military, your credentials to practice at your MTF could be removed as well.

32. A – CPS investigates allegations of child abuse along side law enforcement and they present evidence in family/civil court proceedings to determine if abuse occurred. However, they are not required to show proof beyond a reasonable doubt. In family/civil courts the burden of proof is less than for criminal courts. CPS must show “a preponderance of the evidence”, which is roughly interpreted to mean they need to show that abuse occurred more likely than not.

33. B – In this scenario you are not acting in a professional capacity and therefore are not acting as a mandated reporter. However, in some states (Texas, for example), ALL citizens of the state are mandated reporters so you would still be held accountable as a citizen of the state, not as a physician. Please, just be a good person and report it, regardless.

The information CPS will request from you will most likely be the child’s name and address, details of your suspicions or what you saw, and who you are. In most states individuals can make an anonymous report to CPS if one wishes.

34) C – There are 2 main types of witnesses in a trial – 1) a fact witness is a person who has first hand knowledge about information important to the case and 2) an expert witness who has a special knowledge set that may be important to the case and who is considered by peers to be an expert in that particular field. A treating physician would be considered a fact witness; no one other than s/he has the first hand information about the care and treatment of the child and therefore they cannot be replaced by another person in the court room. An expert witness has the ability to refuse the offer to testify in a trial about their area of specialty and they can be replaced with another expert with the same background.
35) B – You are not able to discuss the specific case. However, if you want to you can discuss the topic of child abuse and neglect generally. If you are in any way representing the military (give your rank, where you work, discuss DoD policy, etc) you are required to pass your statement through the PAO first or have the PAO present when you speak with the media. If you are at all unsure what you can and cannot say, it is best to not speak with the media at all until your questions are resolved.