Nuts and Bolts of a Case Review

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Objectives

- The participant will be able to describe the elements of a case review.
- The participant will be able to identify limitations of materials that they are given for a case review.
- The participant will be able to formulate an impression, recommendation(s) and plan for a case review.
What is a Medical Case Review?

- Review of documents to ensure proper evaluation
- Offer recommendations for additional evaluation
- Assist with impression/diagnosis
Elements of a Case Review

- Introduction
- Identification of information reviewed
- Background information
- Pictures or radiology
- Assessment, plan, recommendations
Introduction

- Clearly state the name of the child and his/her date of birth
- Identify yourself
- Identify who asked for the review

To Whom It May Concern:
This letter is in reference to ________, date of birth, ________. I am a Child Abuse Pediatrics Fellow at Children’s Mercy Hospital in Kansas City, Missouri. I was asked to review ________ case by Children’s Division worker, ________.
Elements of a Case Review

- Introduction
- Identification of information reviewed
- Background information
- Pictures or radiology
- Assessment, plan, recommendations
Reviewed Information

- Identify what information is reviewed
  - PDF files
  - Photographs, CDs
  - Word documents
  - Written reports from Children’s Division and/or law enforcement
  - Medical records
Reviewed Information

Information reviewed includes the following:

- PDF files labeled:
- Word documents labeled:
- Pictures labeled:
Elements of a Case Review

- Introduction
- Identification of information reviewed
- Background information
- Pictures or radiology
- Assessment, plan, recommendations
Background

- Obtain written information from law enforcement, Children’s Division and hospital/clinic medical records

- May have to obtain additional records
Limitations

- Do you have all of the information that you need?
- Can you request additional information?
- Did the information answer all of your questions?
- Is all of the information clearly identified?
Background

- Identify the source of the information
  - Who authored the report
  - Date of the report
  - Was the name of the child identified?
Background

- After reviewing all of the written documentation write a summary of events in chronological order

Paul is a 1 year old male who was found to have a bruise on his bottom on 9/02/2016. This was found by his mother after returning from his father’s house. Dad told mom that he was playing and fell on his bottom. Mom took Paul to the emergency room on 9/02/2016. He was noted to have a blue bruise on his bottom. A hotline was made from the emergency room.
Background

Additional strategy: summary by report

Summary of Police Report from 9/2/16:
On 9/2/16, Paul’s mother reported that she found a bruise after returning from his father’s house. Dad told mom that he was playing and fell on his bottom. Mom took Paul to the emergency room on 9/02/2016.

Summary of Medical Records from 9/2/16:
Hospital documentation notes that mom reported to find a bruise after patient returned from dad’s house. On physical exam, he was noted to have a blue bruise on his bottom. A hotline was made from the emergency room.
Elements of a Case Review

- Introduction
- Identification of information reviewed
- Background information
- Pictures or radiology
- Assessment, plan, recommendations
Pictures/Images

- Photographs
  - Injuries
  - Scene
  - Other
- Radiology images
  - X-ray, CT, MRI
- Police interviews
Limitations

- Is the person in the picture identified?
- When was the picture taken?
- Can you tell what body part is being photographed?
- Is the picture clear?
- Who took the picture?
Digital photographs were reviewed. In the PDF file labeled____, there are 3 separate images. The pictures do not identify the name of the child, however, the child appears to be a young male. As well, the images are not dated and are somewhat difficult to see due to pixilation. There are 3 pictures of the boy’s face. He appears to have 2-3 small, round, red, marks on his left cheek.
Radiology Images

- Identify what you reviewed
- Describe what you see/what was reported

Radiology images reviewed:
  - CT brain dated ____:
  - MRI brain dated ____:
  - Skeletal survey dated ____:
Limitations

- Do you have the radiology images or just the reports?
- Do you have all of the images that are needed?
- If it is a skeletal survey, was it complete?
  - All skeletal surveys should be done according to the American College of Radiology guidelines
  - Was a repeat skeletal survey done?
- Were the images read by a pediatric radiologist?
Elements of a Case Review

- Introduction
- Identification of information reviewed
- Background information
- Pictures or radiology images
- Assessment, plan, recommendations
Assessment/Impression

- Describe typical mechanism of injury
- Describe limitations to coming to your diagnosis
- Describe a differential
- Impression/Diagnosis
Assessment/Impression

- Describe typical mechanism of injury
- Describe limitations to coming to your diagnosis
- Describe a differential
- Impression or Diagnosis
Limitations

- Were you given pictures? Where they adequate?
- Was appropriate evaluation done?
- Was imaging completed? Was repeat imaging done when needed?
- Diagnosis is limited by the information you have been given
Recommendations/Plan

- Additional radiology studies, including timeframe
- Additional lab work, including timeframe
- Forensic interview needed?
- Additional scene investigation, interviews needed?
- Safety recommendations
Example

- John Doe, DOB 7/1/16
- Children’s Division worker, Sam Smith, sent request for review
- Bruise to leg and chest noticed by babysitter
- Parents report he tripped and fell
Provided Information

- Word document: Johnbruise.doc
- Photographs: John1; John2
1/28/17 Interview with parents at 10:30:
Mary said that John was trying to run across the living room yesterday when he tripped and fell to the ground. She said he cried but then got up and continued playing. Mary said that John is clumsy and falls a lot. Jack said that John is always falling and getting hurt.

1/27/17 Interview with Kate at 4:30:
Kate was changing John's clothes because he had dumped a large glass of juice down the front of his clothing. Kate noticed a bruise on John's leg and also on his chest. John's 3 year old sibling said "mommy hit" and pointed to John's leg.

Questions we would like answered.
Could the bruises be caused from tripping and falling to the ground?
Could the bruises be caused by being hit?
Limitations

- Limited documentation provided
- No description of the bruise/ location
- Developmental history?
- Medical history?

1/28/17 Interview with parents at 10:30:

Mary said that John was trying to run across the living room yesterday when he tripped and fell to the ground. She said he cried but then got up and continued playing. Mary said that John is clumsy and falls a lot. Jack said that John is always falling and getting hurt.

1/27/17 Interview with Kate at 4:30:

Kate was changing John’s clothes because he had dumped a large glass of juice down the front of his clothing. Kate noticed a bruise on John’s leg and also on his chest. John’s 3 year old sibling said “mommy hit” and pointed to John’s leg.

Questions we would like answered:

Could the bruises be caused from tripping and falling to the ground?
Could the bruises be caused by being hit?
Photographs

Photo labeled John1

Photo labeled John2
Limitations

- No identification
- Blurry
- Who took pictures?
- When were pictures taken?
Diagnosis

- Location of bruise on lateral thigh concerning for inflicted injury
- Multiple injuries at the same time in different planes concerning for inflicted injury
- Pictures were not very clear, however could be consistent with bruising
- Not consistent with tripping and falling to the ground
- Unlikely that child can run at his age
Recommendations

- Skeletal survey and liver function tests
- Bleeding evaluation: cbc, pt, ptt, factor 8, factor 9, von willebrand factor antigen, von willebrand factor activity
- Forensic interview of 3 year old sibling
- Return patient to safe environment
To Whom It May Concern:

This letter is in reference to John Doe, date of birth, 7/1/2016. I am a Child Abuse Pediatrics Fellow at Children’s Mercy Hospital in Kansas City, Missouri. I was asked to review John’s case by Children’s Division worker, Sam Smith.

Information reviewed includes the following:
   Word document labeled: Johnbruise.doc
   Pictures labeled: John1; John2
John is an 18 month old male who was found to have a bruise on his leg and chest by his babysitter on 1/27/17. Kate was changing John’s clothes on 1/27/17 and noticed a bruise on his leg and his chest. John’s 3 year old sibling pointed to John’s leg and said “mommy hit.” Parents were interviewed on 1/28/17 and reported that John was running across the living room and tripped and fell to the ground. They report that he is clumsy and falls frequently.
Digital photographs were reviewed. The pictures do not identify the name of the child, however, the child appears to be young. In addition, the pictures are not dated and are slightly blurry. The picture labeled John1, shows a purple/red bruise from the left lateral knee to the mid-lateral left thigh. There also appears to be a red linear mark on the top of the left foot. The picture labeled John2, shows a linear red line in the center of the chest.
John is an 18 month old male who was found to have a bruise on his leg and chest. Parents provided a history of John tripping and falling to the ground. Bruising to the lateral thigh, which is a soft part of the leg, is an uncommon location for an accidental injury. The chest wall is not a location where accidental injuries are typically seen, and this injury by location is highly concerning for inflicted injury. Ambulatory children can sustain accidental bruising from falls, however, these bruises are most likely to be found on bony prominences such as shins, elbows and the forehead. In addition, injuries across multiple planes (lateral thigh, chest and foot) would not be consistent with a simple, single fall to the ground. Each bruise indicates an area of impact. Based on the provided documentation and photographs, the injuries are most consistent with child physical abuse.
Putting It All Together:
Recommendations

1. Due to concern for inflicted injury, John should have a medical evaluation to screen for occult injury, including liver function tests and a skeletal survey. Would recommend that he have a skeletal survey done as soon as possible to assess for bony injury. The skeletal survey should follow the guidelines/procedures as described by the American College of Radiology, and may need to be completed at a children’s hospital. If he is not having any current abdominal symptoms, liver function testing, looking for liver injury, is not required at this time.

2. Recommend screening for bleeding disorders that may manifest as cutaneous bruising given the volume of simultaneous bruising seen on John. Recommend laboratory tests including: complete blood count (CBC), PT, PTT, factor 8, factor 9, von willebrand factor antigen level, and von willebrand factor activity (ristocetin cofactor).

3. Depending on the verbal ability of John’s 3 year old sibling, he/she may be able to complete an extended forensic interview. This could be helpful in determining the cause of his bruises as well as identifying any violence that may be going on in the home.

4. Recommend that John remain in a safe environment. Leaving an abused child in an abusive home setting without addressing the cause of the abuse places the child at great risk of future harm and/or death.
February 15, 2017

To whom it may concern:

This letter is in reference to John Doe, date of birth, 7/1/2016. I am a Child Abuse Pediatrist Fellow at Children’s Mercy Hospital in Kansas City, Missouri. I was asked to review John’s case by his Children’s Dentist, Dr. Smith.

Information received includes the following:

- Wound Document Number: unknown
- Police Officer: John Doe, WD

John is an 18-month-old male who was found to have a bruise on his leg and arm by his babysitter on 2/5/2017. Kate was changing John’s clothes on 2/5/2017 and noticed a bruise on his leg and the chest. She’s also a year and a half pregnant. John’s leg and arm had bruises, and 2/5/2017 and appeared that John was running across the living room and tripped and fell to the ground. They reported that he is clumsy and falls frequently.

Digital photographs were reviewed. The pictures do not show the name of the child, however, the child appears to be young. In addition, the pictures were not dated and are slightly blurry. The pictures showed John, whose skin had bruising from the left lateral knee to the mid-left lateral thigh. There also appears to be a small, red mark on the top of John’s left knee. The picture showed John, whose face is red and in the center of the image.

John is an 18-month-old male who was found to have a bruise on his leg and arm. Kate is provided a history of John being run to the ground, while John’s 3-year-old sister and “mommie’s hot” pushed to John’s leg. Running to the living room, which is a soft, pink chair, the image shows a small amount of bruising on John’s leg. The child walk is not a location where accidental injuries are seen, and the child is sitting on a chair slightly concerning for inflicted injury.

Jaw-abuse children can sustain accidental bruising from falls; however, these injuries are mostly found on the lower back, including the buttocks. In addition, bruises and multiple planes (bone, muscle, and skin) would not be consistent with a single fall or cutaneous bruising.

Based on the provided documentation and photographs, the injuries are most consistent with child physical abuse.

1. Due to concern for inflicted injury, John should have a medical evaluation to assess for occult injury, including bone fracture tests and a skeletal survey. Would recommend that the bone be a skeletal survey bone as soon as possible to assess for bone injury. The skeletal survey should follow the guidelines/procedures as described by the American College of Radiology, and may need to be completed at a children’s hospital. It is not a matter of any current non-accidental injury, forensic testing, testing for bone injury, is not expected in time.

2. Recommend ceasing of bleeding disorders that may interfere with venous bruising given the volume of abnormal bruising seen on legs. Recommended: Metyrapone testing including complete blood count (CBC), PT, PTT, Factor VIII, Factor IX, von Willebrand factor antigen, and von Willebrand factor activity (activity co-factor).

3. Due to the potential child abuse history and the current non-accidental injuries, testing for bone injury is not expected in time.

Feeling free to contact us with any questions or concerns, if new information becomes available.

In accordance with the University of Missouri-Kansas City School of Medicine

Dr. Gopal Apparao, M.D., F.A.A. - Pediatrician
Services provided on an in-patient dermatology basis.
Final Report

September 28, 2014

To whom it may concern,

This is an update on the 16th month-old baby (Case Study 9835) on Children’s Mercy Kansas City’s Pediatrics ward. We have discussed this case with the surgeon, Dr. Nancy Neff, Children’s Mercy Pediatrician. We are pleased to report that baby is doing well and making strides in her recovery.

Summary of events:

1. Police Report:
   - The baby, a 16-month-old male, was reported missing on September 21, 2014, from a nearby children’s hospital.
   - The baby was last seen wearing a blue shirt and white pants.
   - The hospital staff reported that the baby had displayed signs of distress and was crying frequently.

2. Medical Records:
   - The baby was taken to the hospital’s emergency room for treatment of dehydration and fatigue.
   - The baby’s vital signs were stable upon arrival.
   - The baby was examined by a pediatrician, who noted no signs of trauma or injury.

3. Investigation:
   - The baby was reported missing by his mother, who stated that she had left him in the care of a relative.
   - The relative, who had been babysitting the baby, stated that he was last seen at 9:00 PM.
   - The relative was interviewed by police and cooperated fully.

4. Surveillance:
   - Security cameras at the hospital recorded footage of the baby being carried by a woman who appeared to be a stranger.
   - The woman was later identified as a hospital staff member who had reported for work at 7:00 PM.

5. Search:
   - A massive search was launched involving the hospital staff, local law enforcement, and volunteers.
   - The search continued throughout the night and into the morning.

6. Additional Information:
   - The baby’s medical condition was reported to be stable, with no signs of injury or trauma.
   - The baby was last seen wearing a blue shirt and white pants.

We are continuing to work with the police and hospital staff to ensure the baby’s safe return. We will provide updates as more information becomes available.

Sincerely,

Children’s Mercy Pediatrician

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If you have any questions or concerns, please feel free to contact us.

Children’s Mercy Kansas City

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If you need additional information or assistance, please contact us at:

Children’s Mercy Kansas City

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Thank you for your continued support and assistance in this matter.

Sincerely,

Children’s Mercy Pediatrician

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If you have any further questions or concerns, please feel free to contact us.

Children’s Mercy Kansas City

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Thank you for your continued support and assistance.

Sincerely,

Children’s Mercy Pediatrician

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If you need additional information or assistance, please contact us at:

Children’s Mercy Kansas City

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Thank you for your continued support and assistance.

Sincerely,

Children’s Mercy Pediatrician
Don’t be afraid to diagnose abuse if the evidence warrants

- “Given the information we have at this time, this child’s presentation is most consistent with a diagnosis of physical abuse”
- Diagnoses can change if new information presents itself!

“Children left in an (abusive, neglectful, etc…) environment without intervention are at high risk for (continued abuse, ongoing harm, long-term negative consequences…)”
Questions??