

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?

Pictures

- Identify what you reviewed
- Describe what you see

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? Were 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: Johnbruisse.doc
- Photographs: John1; John2

Word Document

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

Putting It All Together: Introduction

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

Putting It All Together: Background

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.

Putting It All Together: Pictures

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.

Putting It All Together: Assessment

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 co-factor).
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.

Final Report



Children's Mercy
KANSAS CITY

2401 Gillham Road
Kansas City, Missouri 64108
(816) 234-3000

February 15, 2017

To Whom It May Concern:

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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, while John's 3 year old sibling said "mommy hit" and pointed to John's leg. 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 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 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.

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.
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PTT, factor 8, factor 9, von willebrand factor antigen level, and von willebrand factor activity (ristocetin co-factor).

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.

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

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Final Report



2401 Gillham Road
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September 28, 2016

To Whom It May Concern,

This letter is in reference to the 19 month old child George Washington. I am a Fellow in Child Abuse Pediatrics at Children's Mercy Hospital and have discussed this case with my supervisor, Dr. Mary Moffatt, Child Abuse Pediatrician. We were asked to review George's case by Oprah Winfrey, Children's Division Investigator.

Records reviewed include:

- 1 – Police Report authored by Officer B. Spears on 9/25/16
- 2 – Children's Division Notes authored by Marilyn Monroe
- 2 – Medical Records from Poplar Bluff Regional Medical Center from 9/25/16

Summary of records reviewed:

Police Report Summary:

According to the police report authored by Officer Spears on 9/25/16, George's mother reported that she dropped him off at his baby sitter's at approximately 1830 on 9/24/16 and picked him up on 9/25/16 at approximately 1000. Mom denied any injury prior to being dropped off at the baby sitter. She stated that after she picked him up from the baby sitter's he would say "ouch" when moving his arms to change clothes. Mom then brought the child to her own mother's home where the maternal grandmother felt that his arm seemed to be swelling. At that time, they brought George to Poplar Bluff Regional Medical Center at approximately 1300 and found that his left arm was broken in 2 places. Mom reported that she was not concerned that the babysitter intentionally harmed her son and she had left him with this sitter twice before. After discovering the fractures, mom reported that she texted the sitter who stated he didn't fall while with her but "she noticed it when he was dropped off" and that he was complaining about his arm all night. Officer Spears saw texts on mom's phone, from the babysitter, regarding how her son bit George's sister on the arm, but there were no texts seen regarding any arm injury to George, nor texts mentioning that his arm may be hurt.

Children's Division Interview Notes Summary:

Marilyn Monroe with Children's Division was also present during the interview by Officer Spears. Her notes regarding the interview documented that mom reported she dropped off George at the baby sitter at approximately 1830-1900 and picked him up the next morning at 0930-1000. When she picked him up mom reported that she asked the sitter if he hurt his arm because he was saying "ow" and the sitter said no. Mom reported that she knew the arm was not hurt before dropping him off because he was able to grab a sippy cup with both hands, but was not able to use his left arm at all when she picked him up. Mom reported she took George to her own mother's house and told her about her concerns and Mom's mother then recommended going to the ER, at which time, mom went home, changed clothes and then went to the ER. Mom reported she did not receive any texts or phone calls expressing concern for an injury and did not notice any bruising or scratches. Mom reported that there are other

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children in the home including the baby-sitter's 2 year old daughter. During the interview, Michelle Obama, a Children's Division supervisor arrived and asked mom where she went while her son was with the babysitter. Mom reported that she was out with friends.

Mom's mother (George's maternal grandmother) arrived after the mother's interview was complete and completed a written statement. In the statement she reported that mom picked up her children and asked the babysitter if he fell because he was complaining about his arm. Mom then took the child to her (maternal grandmother) and she recommended going to the ER. Maternal Grandmother documented that she then called the baby-sitter's sister and got "conflicting statements" about the injury. She documented that the baby-sitter's sister said that the baby-sitter said that he may have fallen off of the slide or the sidewalk, and mentioned that "Adam" picked him up and asked if his arm was broken because it fell out of place.

Medical Record Summary:

The medical records (nursing notes and provider notes), from Poplar Bluff Regional Medical Center on 9/25, document that mom reported she dropped of the patient (George) at the baby-sitter's the night before and he stayed overnight. When she picked up the patient the next morning, the sitter told her that the patient was not using his left arm and she didn't know why.

A physical exam of the patient documented that there was pain in the left arm, slight swelling to the left arm, limited range of motion of the left elbow and pain in the left arm with grimacing upon palpation of the forearm and elbow. No bruising or abrasions were documented.

An x-ray including AP and lateral views of the left forearm was obtained. The radiology report documents "minimally displaced transverse fractures of the mid radius and ulna." No images from Poplar Bluff Regional Medical Center are yet available for my review.

Assessment:

1. Transverse fractures of the left radius and ulna
2. Child Physical Abuse versus Supervisional Neglect and Medical Neglect

Discussion:

George is a 19mo with transverse fractures of the left radius and ulna, the bones in the left forearm. Transverse fractures of the forearm result from bending forces exerted on the bones, which may result from various mechanisms including a direct impact to the forearm, forceful manipulation of the forearm, or a fall onto the forearm, typically involving a fall onto an object. This type of injury would be incredibly painful to a child, at the time of the fracture, and would result in immediate decreased use of the arm after the injury. It should be obvious to a caregiver present at the time of the injury that an injury occurred.

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At this time, there has been no explanation given for the fracture of George's arm which raises the concern for an inflicted injury. At 19 months of age, George is likely walking and climbing and may have the capacity to sustain an accidental fracture to his arm from a fall. However, any caregiver supervising George should be able to provide a history for an accidental injury as George would have been in significant pain when the injury occurred and subsequently would not be using his arm normally. If no one was nearby properly supervising when George broke his arm, this is consistent with supervisory neglect. Further, based on the statement by maternal grandmother, there may be an individual, "Adam" who asked if George's arm was broken. If there was concern for a significant injury to George's arm and no one sought medical care, this is consistent with medical neglect.

Given the information currently available, including a significant injury and no explanation for the injury, I am concerned for child physical abuse; however, this type of injury may also be the result of supervisory neglect and an accidental fall mechanism.

Plan:

1. Recommend a Skeletal Survey, per American College of Radiology protocol, to evaluate for any additional fractures.
2. Recommend that other children <5 years of age, who were present in the sitter's household on 9/24/16, have medical evaluations to look for injuries.
3. Recommend thorough investigation by LE and CD to include determination of the last time George was clearly using his left arm as this would indicate that his arm was injured after that time.
4. Recommend consideration of forensic interviews of children >3yrs of age in the home to evaluate any concerns for abuse and information regarding George's injury.
5. It would be helpful to review the radiology images from George's visit to Poplar Bluff Regional Medical Center on 9/25/16.

Thank you for allowing us to participate in George's care. Please call with any further questions about this case.

Liza Murray, MD
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Helpful Hints

- 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??