

ihuman **Case Study - Caleb Metz** - 13yrs Old Male CC: Testicular Pain A+ Rated Solution Guid

Nursing
University of Delaware (UD)
27 pag.



ihuman Case Study - Caleb Metz - 13yrs Old Male CC: Testicular Pain

A+ Rated Solution Guide

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Caleb Metz

13 y/o

5' 5" (165 cm)

120.0 lb (54.5 kg)

Chief complaint

testicular pain

Skin: warm, mildly diaphoretic.

Pain in private parts

Vomiting once on the way to clinic

Pain down low in stomach and private parts

Pain started two hours ago.

Hints

Hint 1 of 5

You have asked **7** key questions. **26** key questions remain.

You need:

- **8** more in **Associated Symptoms**
- **4** more in **PMH**
- **2** more in **SH**
- **1** more in **FH**
- **2** more in **Etiology**
- **9** more in **ROS**

Your current Hx efficiency is **8%**.

OK

Hints

Hint 2 of 5

You have asked **14** key questions. **19** key questions remain.

You need:

- **2** more in **Associated Symptoms**
- **4** more in **PMH**
- **2** more in **SH**
- **1** more in **FH**
- **1** more in **Etiology**
- **9** more in **ROS**

Your current Hx efficiency is **9%**.

OK

Graded	Approach	Question	Response	Information Obtained <i>Clinic Notes</i>
●	CC Sx	How can I help you today?	I have this pain down in my private parts on the left. My dad's here, but he said he had to move the car because it was parked in a bad place. He wants me to answer all the questions, if I can.	
●	Assoc Sx	Is your urine pink or red in color (blood in urine)?	No. I can't see any.	
●	Assoc Sx	Do you have pain/discomfort when you urinate?	No, that's not where the pain is.	
●	Assoc Sx	Any change in the frequency of your bowel movements?	No, I don't think so. I went last night.	
⊗	Assoc Sx	Do you have any pain in your leg(s)?	No, it's down low... in my groin...that's what my dad calls it... and my privates -- on the left.	

●	Assoc Sx	Do you have any pain in your abdomen?	It's not in my stomach. It's, down here low on the left. My dad keeps calling it my "groin". It really hurts.	
●	Assoc Sx	Have you been having fevers?	No. It doesn't feel like it.	
●	Assoc Sx	Do you have any problems with movement?	Oh, you mean does it hurt my privates when I move or walk. Yes, a lot!	
●	Assoc Sx	Do you have any other symptoms or concerns we should discuss?	I threw up once on the way here, I still feel really sick.	
●	Assoc Sx	Do you have any pain in your back?	No, it's all here in the front.	
●	Etiology	Have you had any trauma to your groin?	Like, did I get hit playing basketball? No, I don't think so.	
●	Etiology	How is your appetite? Any recent change?	It was OK this morning, but I don't feel hungry now.	

OLD-CARTS for the HPI

● Asked ☒ Not asked

Graded	Approach	Question	Response	Information Obtained <i>Clinic Notes</i>
●	Onset	When did your testicular pain start?	Two hours ago.	
●	Onset	What are the events surrounding the start of your testicular pain?	I was playing basketball -- doing lay-ups. Nothing extreme... then suddenly...wham, the pain came out of the blue.	
	Location			
	Duration			
●	Characteristics	What does your testicular pain feel like?	Uh...really, really bad. Like I got punched.	
●	Characteristics	Does your testicular pain come and go?	No. It's bad all the time.	



	Aggravating		
	Relieving		
	Timing/Treatments		
●	Severity	How severe (1-10 scale) is your testicular pain?	Maybe a 9? I have never had anything like this before.

PMH, FH, SH as Needed

● Asked ☒ Not asked

Graded	Approach	Question	Response	Information Obtained <i>Clinic Notes</i>
●	PMH	Are you taking any prescription medications?	No, I don't take any pills.	
●	PMH	Have you ever been diagnosed with a hernia?	No, I don't think so.	
●	PMH	Are you taking any over-the-counter or herbal medications?	No.	
●	PMH	Do you have any allergies?	I'm pretty sure I don't.	
●	SH	How is your family and family life?	Pretty good, I guess.	
●	SH	Are you sexually active?	You're crazy. I'm a kid? That's a weird question.	
●	FH	Are there any diseases that run in your family?	Dad takes something for his blood pressure, but that's it.	

Review of Systems (ROS)

Select the major body systems that have not been touched on during the interview process for the HPI.

● Asked ☒ Not asked

Graded	Question	Response	Information Obtained <i>Clinic Notes</i>
●	Have you noticed any bruising, bleeding gums, nose bleeds, or other sites of increased bleeding?	Nope.	
●	Do you have problems with heat or cold intolerance, increased thirst, increased sweating, frequent urination, or change in appetite?	Nope.	



●	Do you have problems with dizziness, fainting, spinning room, seizures, weakness, numbness, tingling, or tremor?	Nope.	
●	Do you have any problems with an itchy scalp, skin changes, moles, thinning hair, or brittle nails?	No, none of that stuff.	
●	Do you have any problems with nervousness, depression, lack of interest, sadness, memory loss, or mood changes, or ever hear voices or see things that you know are not there?	Nope.	
●	Do you have any problems with fatigue, difficulty sleeping, unintentional weight loss or gain, fevers, or night sweats?	What does any of that have to do with why my privates hurt?	
●	Do you have any problems with headaches that don't go away with aspirin or Tylenol (acetaminophen), double or blurred vision, difficulty with night vision, problems hearing,	Nope.	
●	Do you experience chest pain discomfort or pressure; pain/pressure/dizziness with exertion or getting angry; palpitations; decreased exercise tolerance; or blue/cold fingers and toes?	There's nothing wrong with my chest. That's not where it hurts!	
●	Do you experience shortness of breath, wheezing, difficulty catching your breath, chronic cough, or sputum production?	No.	



Exams

Skin, Hair, Nails - inspect skin overall

- Mildly diaphoretic, skin warm
- Acne noted on face and back
- No rash

Exams

HEENT - inspect/palpate head

- Normocephalic, atraumatic
- No deformities
- Facial feature symmetric
- Temporal arteries non-tender to palpation
- Frontal and maxillary sinuses non-tender



Exams

HEENT - inspect eyes

- Eyelids: no ptosis erythema or swelling
- Conjunctivae: pink, no discharge
- Sclerae: anicteric
- Orbital area: no edema, redness, tenderness or lesions noted

Exams

Chest Wall & Lungs - visual inspection - anterior & posterior chest

- The chest is symmetrical and the anterior-posterior (AP) diameter is normal.
- The excursion with respiration is symmetrical and there are no abnormal retractions or use of accessory muscles.
- No distension, scars, masses or rashes.

Exams

Chest Wall & Lungs - palpate - anterior & posterior chest

- No tenderness, lumps or masses.
- Normal tactile fremitus.
- All superficial thoracic lymph nodes (axillary, infraclavicular, supraclavicular) are non-palpable or of normal size and consistency .

Exams

Chest Wall & Lungs - percuss - anterior & posterior chest

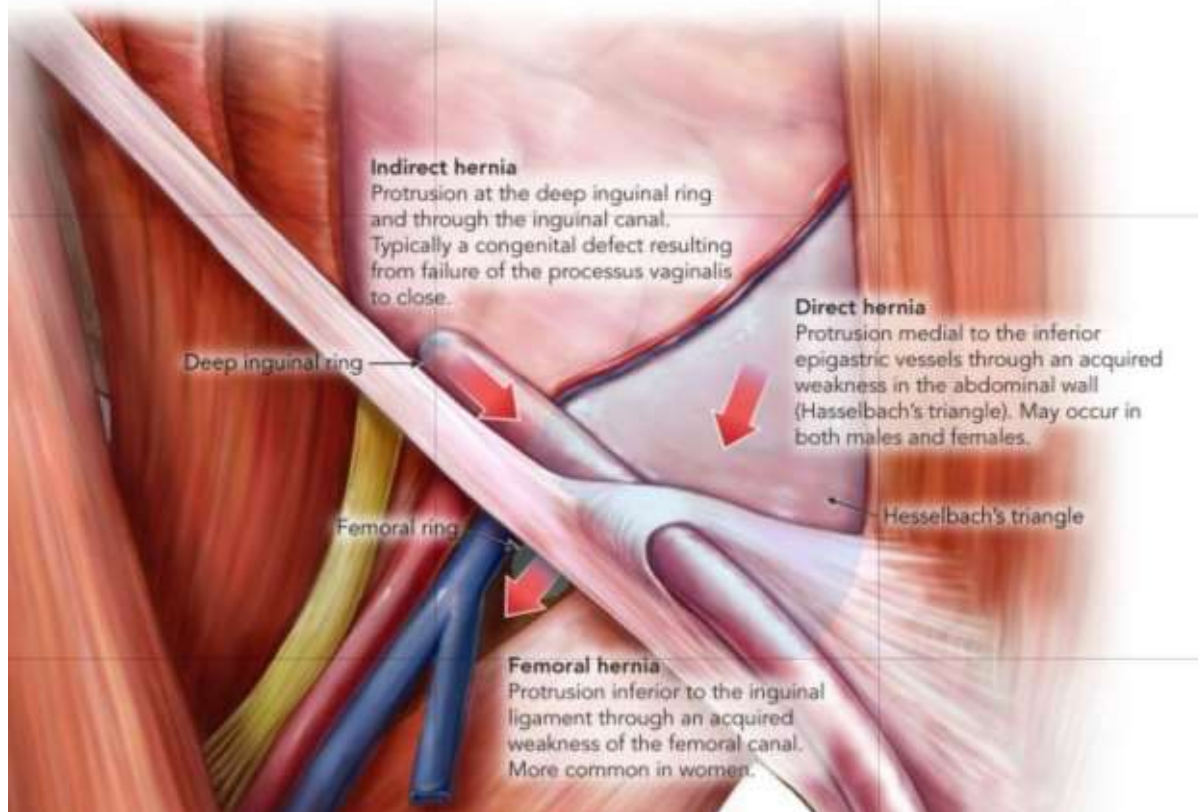
- The anterior lung fields are resonant
 - The left anterior chest (heart) and right lower chest (liver) are dull to percussion
 - The rest of the lung fields are resonant and are not hyper-resonant
-

Exams

Neck - inspect neck

- No visible scars, deformities or other lesions
 - Trachea is midline and freely mobile
 - No asymmetry or accessory respiratory muscle use with quiet breathing
-

MALE INGUINAL ANATOMY



HERNIATION TYPES



- Abdomen lean, muscular, nondistended
- No visible herniation

Review the pathogenesis of the 3 demonstrated types of inguinal herniation:

- Indirect
- Direct
- Femoral

Exams

Abdomen - palpate abdomen

- Soft, nontender to palpation
- No organomegaly; no abdominal or inguinal mass

Exams

Abdomen - percuss abdomen

- Abdomen normal to percussion



Exams

Extremities - visual inspection extremities

- There is no swelling or deformity.
- There is no cyanosis, clubbing or edema.

Exams

Lymphatic - palpate all lymph nodes

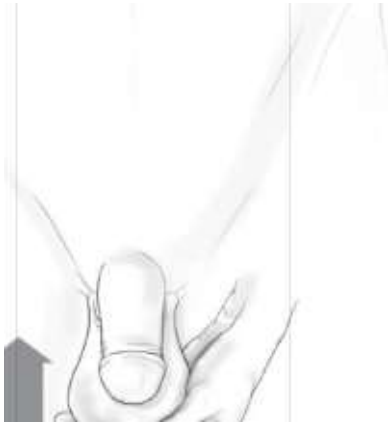
- No inguinal adenopathy



CREMASTERIC REFLEX

Lightly stroke the superior-medial region of the thigh with the second and third fingers in an upward or downward direction.

The normal response is an immediate contraction of the cremaster muscle that results in elevation of the ipsilateral testis.



PREHN SIGN

Indication: Evaluation of acute testicular pain

Technique:
Elevate scrotum with cupped hand supporting testicle.

Positive sign:
Elevation of testicle relieves pain ➡ suggests epididymitis.

Negative sign:
Elevation of testicle does not relieve pain ➡ suggests testicular torsion.

- Left hemiscrotum swollen and mildly erythematous
- Left testicle appears higher than the right; scrotum is too swollen to determine testicular lie
- Left testicle exquisitely tender to touch; no masses appreciated
- Absent left cremasteric reflex; right WNL
- Negative Prehn's sign
- Tanner stage 3; circumcised, no penile discharge
- No rash or lesions

Exams

Genitourinary - prostate exam

- Normal size, shape and consistency (rubbery)
- No nodules or tenderness

Which of the following are risk factors for testicular cancer? (Select all that apply.)

● Correct ☒ Missing ✗ Incorrect

Yours	Graded	Choice
<input checked="" type="checkbox"/>	●	Caucasian race
<input type="checkbox"/>		Ages 12-25
<input checked="" type="checkbox"/>	●	Family history
<input checked="" type="checkbox"/>	●	Undescended testicles
<input type="checkbox"/>		Smoking
<input type="checkbox"/>		Bike riding

Scoring: Your score will be 0 if you select more than the number of correct choices.



Expert Feedback

Vitals Documentation:

- *Pulse*: Good, all correct. (FYI actual rate: 120)
- *Respiration*: Good, all correct. (FYI actual rate: 18)
- ✗ *BP*: Incorrect assessment, correct is *normal*. (FYI actual BP: 130/70)
- *Mental Status*: Good, all correct.

Exam Documentation:

- *Lung Auscultation*: Good, all correct.
- *Cardiac Auscultation*: Good, all correct.
- *Eyes - Pupils*: Good, all correct.

Exams Performed:

- Correct

Good job, you performed all appropriate :

1. *Vitals: Temperature (provided)*
 2. *Vitals: Skin (provided)*
 3. *Vitals: Pulse*
 4. *Vitals: BP*
 5. *Chest Wall & Lungs: auscultate lungs*
-

6. Heart: auscultate heart
7. Abdomen: auscultate abdomen
8. Abdomen: visual inspection abdomen
9. Abdomen: palpate abdomen
10. Abdomen: percuss abdomen
11. Lymphatic: palpate all lymph nodes
12. Genitourinary: genitourinary male exam

You also performed additional exams that were not required, but are never inappropriate.

1. Vitals: SpO2 (provided)
2. Vitals: SpCO (provided)
3. Vitals: eTCO2 (provided)
4. Vitals: Respiration

✗ Incorrect

You performed 16 exams not required by expert.

1. Vitals: Mental Status
 2. HEENT: examine pupils
 3. Neck: auscultate carotid arteries
 4. Abdomen: auscultate abdominal/femoral arteries
-

Exam Performance:

✗ Incorrect

You made 2 errors performing some exams:

1. Did not auscultate the anterior in the correct order.
2. Did not auscultate the posterior in the correct order.

Reminder:



Key Finding Relation to MSAP

pain and swelling in left scrotum started two hours ago	MSAP
diaphoresis	Related
swelling in left scrotum	Related
pain rated 9 at the scale from 0 to 10	Related
persistent pain, gets worse with movement	Related
pain to palpation in left testicle	Related
nausea and one vomiting episode	Related
tympanostomy tubes in childhood	Resolved/PMH
cremasteric reflex is absent	Related

Expert's Feedback

Key Finding	MSAP Relation
Sudden-onset left scrotal/testicular pain and swelling in a 13-year-old male	MSAP
Nausea with 1 episode of vomiting	RELATED
Tachycardia	RELATED
Diaphoresis	RELATED
Left scrotal swelling per exam	RELATED
Left scrotal erythema per exam	RELATED
Left testicular pain to palpation	RELATED

Absent cremasteric reflex (left)

RELATED

History of tympanostomy tubes as young child

RESOLVED

The medical problem list you have compiled should be a list that includes everything that is out of the ordinary about this patient, even when it is not a "problem" in the true sense of the word.

Next, this list should be examined in an attempt to group those findings that are related to the chief complaint or MSAP or that tend to be found together in specific disease states. This is the first step in developing and ranking your differential diagnosis.

In this case, sudden onset of left scrotal/testicular pain and swelling per history represents Caleb's chief complaint, as well as

Write your problem statement in the space below.
You have used 59 of a maximum of 125 allowed for this case.

CM is a 13 years old male has pain and swelling in left testicle which has started two hours ago during the basketball match. He rated pain as 9 on the pain scale from 0 to 10. He also has nausea and 1 episode of vomiting. Tachycardia and diaphoresis observed. The cremasteric reflex is also absent on physical assessment.

Expert's Feedback

Caleb Metz is a 13-year-old male who experienced the sudden onset of pain in the left scrotum during physical activity 2 hours prior to ED presentation. He has associated nausea, and has vomited once since the onset of pain. He has had no similar prior occurrences. On physical exam he appears to be in significant pain and is restless. He is tachycardic and diaphoretic, yet afebrile. Genital exam reveals left scrotal tenderness, swelling, and redness, with an absent cremasteric reflex ipsilaterally.

Gloria problem statement

13-years-old male child has sudden onset of left testicular pain 2 hours ago. The pain started during the basketball match. He is also experiencing nausea and had one episode of vomiting. During physical

assessment swelling is observed in left testicle and left cremasteric reflex is absent. Patient has tachycardia and diaphoresis.

The image shows a screenshot of a medical education interface. On the left, a panel titled "Student Differential Diagnoses" lists several conditions with green circular markers: testicular torsion, hernia, inguinal, torsion of testicular appendage, appendicitis, urolithiasis, epididymitis, and testicular neoplasm (marked with a red X). On the right, a panel titled "Expert Feedback" shows "Selected Differential Diagnoses" under a "Correct" category, listing urolithiasis, torsion of testicular appendage, testicular torsion, appendicitis, epididymitis, and hernia, inguinal. Below this, a "Missing" category is shown with a yellow circle icon and the text "You were missing 0 diseases that were specified by the case author."

HPI yemisi

Caleb Metz is a 13 years old male patient came to the clinic with the complaint of pain on the left side of groin region. He mentioned that the pain started about two hours ago during his basketball match. He stated that a sharp pain started suddenly and is persistent. He rated pain as 9 on the pain scale from 0 to 10. He is also experiencing nausea and has one episode of vomiting since then. Nothing is relieving the pain however, the pain increases with movement. He has not taken any medication for the pain.

Hpi Gloria

Cc: testicular pain

Caleb Metz is a 13-years-old child came to the clinic with his father, with a complaint of testicular pain. The patient stated that a sudden pain in his left testicle started two hours ago when he was playing the basketball match. The pain is persistent and increases when he walks or moves. He is also experiencing nausea and had vomited once. Patient has not taken any medication for the pain. Patient rated the pain 9 at the pain scale of 0-10.

Finalize the ranking of your corrected DDX. Rank the differential diagnosis represents a *must-not-miss* (MnM) diagnosis or condition.

Sort By Rank

Differential Diagnosis

Lead or Alt | MnM

testicular torsion	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
hernia, inguinal	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
torsion of testicular appendage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
appendicitis	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
urolithiasis	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
epididymitis	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Test/Diagnosis Association

Association of test with diagnosis:

● Correct ✗ Incorrect ⊗ Missing

Other Tests

testicular torsion

- ✗ scrotal ultrasound
- scrotal ultrasound, doppler

hernia, inguinal

- ✗ abdomen CT
- CT abdomen/pelvis without contrast
- ✗ CT abdomen/pelvis with IV contrast

torsion of testicular appendage

Association of test with diagnosis:

● Correct ✗ Incorrect ⊗ Missing

● scrotal ultrasound, doppler

✗ scrotal ultrasound

appendicitis

● complete blood count (CBC)

● CT abdomen/pelvis without contrast

✗ urinalysis (UA)

urolithiasis

● urinalysis (UA)

● CT abdomen/pelvis without contrast

epididymitis

epididymitis

● urinalysis (UA)


✗ scrotal ultrasound, doppler


Which of the following statements are true regarding the utility of ultrasound in cases of suspected epididymitis? Select all that apply.

● Correct ☒ Missing ✗ Incorrect

Yours	Graded	Choice
<input type="checkbox"/>	☒	Ultrasound may be normal
<input type="checkbox"/>	☒	Ultrasound may show increased blood flow
<input type="checkbox"/>		Ultrasound may show decreased blood flow
<input checked="" type="checkbox"/>	✗	Ultrasound is necessary to make the diagnosis
<input type="checkbox"/>		None of the above

Scoring: Your score will be 0 if you select more than the number of correct choices.





Diagnosis

What is the correct diagnosis for this patient?
 ● Correct ☒ Missing ✗ Incorrect

Yours	Graded	Choice
<input type="radio"/>		appendicitis
<input type="radio"/>		epididymitis
<input type="radio"/>		hernia, inguinal
<input checked="" type="radio"/>	●	testicular torsion
<input type="radio"/>		torsion of testicular appendage
<input type="radio"/>		uroithiasis

Discussion

Definitive diagnosis: Testicular torsion

The sudden onset of testicular pain, along with physical findings of scrotal erythema/swelling and elevated testicle are highly suggestive of testicular torsion. The absent cremasteric reflex is highly predictive of this diagnosis; and, the absent blood flow to the affected testicle on ultrasound Doppler evaluation confirms the diagnosis. If history and physical exam alone are suspicious for testicular torsion, urgent urology consultation should not be delayed for imaging studies.

Expert's Feedback

- Extravaginal testicular torsion most commonly presents in neonates.
- Intravaginal testicular torsion most commonly occurs in adolescents, but can be seen in any age group.

Discussion

1 of 5 [Index of Diagnosis Exercises](#)

The tunica vaginalis is a fascial structure that ensheathes the testis (other than the posterior border), the epididymis, and the spermatic-cord structures. It has both an inner visceral layer and an outer parietal layer. Testicular torsion may occur within the tunica vaginalis (intravaginal), or exterior to — and inclusive of — the tunica vaginalis (extravaginal).

In what age groups are these types of testicular torsion most common? (Short answer)

Testicular torsion commonly occurs among neonates and adolescents (12-18 years of age).



2 of 6 [Index of Diagnosis Exercises](#)

What diagnosis is the *blue dot sign* associated with?

● Correct ☹ Missing ✗ Incorrect

Yours	Graded	Choice
<input type="radio"/>		Testicular torsion
<input type="radio"/>		Epididymitis
<input type="radio"/>		Appendicitis
<input checked="" type="radio"/>	●	Torsion of the testicular appendage
<input type="radio"/>		Nephrolithiasis

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What diagnosis is *horizontal lie of the testicle* associated with?

● Correct ☹ Missing ✗ Incorrect

Yours	Graded	Choice
<input checked="" type="radio"/>	●	Testicular torsion
<input type="radio"/>		Epididymitis
<input type="radio"/>		Appendicitis
<input type="radio"/>		Torsion of the testicular appendage
<input type="radio"/>		Nephrolithiasis



4 of 6 [Index of Diagnosis Exercises](#)

What diagnosis is the *Prehn's sign* associated with?

● Correct ⊗ Missing ✗ Incorrect

Yours	Graded	Choice
<input type="radio"/>		Testicular torsion
<input checked="" type="radio"/>	●	Epididymitis
<input type="radio"/>		Appendicitis
<input type="radio"/>		Torsion of the testicular appendage
<input type="radio"/>		Nephrolithiasis

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What diagnosis is hematuria associated with?

● Correct ⊗ Missing ✗ Incorrect

Yours	Graded	Choice
<input type="radio"/>		Testicular torsion
<input type="radio"/>		Epididymitis
<input checked="" type="radio"/>	✗	Appendicitis
<input type="radio"/>		Torsion of the testicular appendage
<input type="radio"/>	⊗	Urolithiasis



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What diagnosis is Rovsing's sign associated with?

● Correct ☒ Missing ✗ Incorrect

Yours	Graded	Choice
<input type="radio"/>		Testicular torsion
<input type="radio"/>		Epididymitis
<input checked="" type="radio"/>	●	Appendicitis
<input type="radio"/>		Torsion of the testicular appendage
<input type="radio"/>		Nephrolithiasis

Plan

Initially, medications for pain management will be given to the patient.

Manual reduction can be considered as an initial management.

As testicular torsion is a medical emergency, the patient will be referred to urologist for surgical correction.

Pain and edema management after surgical procedure can be done.

Plan Gloria

Pain management will be the initial step. Nothing from mouth will be given to the patient. IV morphine can be given.

Testicular torsion is a medical emergency therefore, the patient will be immediately referred to urologist.

manual reduction and surgical correction are two processes.

Manual reduction can be done however, surgical detorsion is required to prevent future testicular torsion.



1 of 4 [Index of Plan Exercises](#)

Salvage rates for testicles in cases of testicular torsion drop off after how many hours?

Correct Missing Incorrect

Yours	Graded	Choice
<input type="radio"/>	<input type="radio"/>	6 hours
<input checked="" type="radio"/>	<input type="radio"/>	12 hours
<input type="radio"/>		24 hours
<input type="radio"/>		48 hours

2 of 4 [Index of Plan Exercises](#)

Testicular torsion should be confirmed by ultrasound prior to taking a patient to the OR?

Correct Missing Incorrect

Yours	Graded	Choice
<input checked="" type="radio"/>	<input type="radio"/>	true
<input type="radio"/>	<input type="radio"/>	false

Expert's Feedback

Incorrect

Discussion

A patient who has a classic presentation of testicular torsion should go to the OR for exploration of the scrotum, as re-establishment of perfusion to the testicle may be delayed by obtaining an ultrasound. In equivocal cases or in the situation in which the ultrasound can be obtained quickly while waiting for the urologist to arrive, obtaining an ultrasound may be appropriate.

4 of 4 [Index of Plan Exercises](#)

At this point in the case, what is the most appropriate choice of analgesics?

Correct Missing Incorrect

Yours	Graded	Choice
<input type="radio"/>		Acetaminophen
<input type="radio"/>		Oral oxycodone
<input checked="" type="radio"/>	<input checked="" type="radio"/>	IV morphine
<input type="radio"/>		Ibuprofen
<input type="radio"/>		Analgesics may mask symptoms and should be avoided



Case Week #10

The following table summarizes your performance on each section of the case, whether you completed that section or not.

Time spent: 3hr 23min 3sec

Status: Submitted

Case Section	Status	Your Score	Time spent	Performance Details
Total Score		73%		
History	Done	97%	21min 25sec	33 questions asked, 32 correct, 1 missed relative to the case's list
Physical exams	Done	86%	29min 44sec	21 exams performed, 9 correct, 2 partially correct, 0 missed relative to the case's list
Key findings organization	Done		1min 0sec	7 findings listed; 9 listed by the case
Problem Statement	Done		4min 0sec	86 words long; the case's was 81 words
Diagnosis	Done	100%	8sec	
Management Plan	Done		48min 16sec	1322 words long; the case's was 193 words
Exercises	Done	100% (of scored items only)	12min 34sec	10 of 10 correct (of scored items only)



Week #10

Use this worksheet to organize your thoughts before developing a differential diagnosis list.

1. Indicate key symptoms (**Sx**) you have identified from the history. Start with the patient's reason(s) for the encounter and add additional symptoms obtained from further questioning.
2. Characterize the attributes of each symptom using "**OLDCARTS**". Capture the details in the appropriate column and row.
3. Review your findings and consider possible diagnoses that may correlate with these symptoms. (Remember to consider the patient's age and risk factors.) Use your ideas to help guide your physical examination in the next section of the case.

HPI	Sx =	Sx =	Sx =	Sx =	Sx =	Sx =
Onset						
Location						
Duration						
Characteristics						
Aggravating						
Relieving						
Timing / Treatments						
Severity						



Case Week #10



Patient is a 13 year old male who has presented to the clinic experiencing sudden onset of pain in the left scrotum during physical activity 2 hours before. The patient has experienced nausea and vomited once at during the onset of pain. He has no similar prior experiences. Upon physical exam, the patient appears to be in significant pain and is restless. He is diaphoretic and tachycardic. Patient is not afebrile. Genital exams further reveal left scrotal tenderness, swelling, and redness. The cremasteric reflex is absent.

Attempt: 3322132

Report generated on 10/29/2024, 8:24:11 AM Europe/Stockholm

Week #10

Primary Diagnosis and ICD-10 code:

Testicular Torsion: ICD-10-CM Code N44.00

Testicular Torsion results from the rotation of the spermatic cord, thus reducing blood flow to the testes. It is one of the most drastic processes influencing the blood flow to testicles into the body. It is among the most severe diseases as it compromises the scrotal contents and can result in the loss of a testicle (Jacobsen et al., 2020). Thus, the symptoms of the figure include sharp pain in the scrotum, scrotum swelling, vomiting, nausea, frequent urination, fever, and one of the testicles being oriented at an unusual angle to the other one.

Differential diagnosis.

1. Epididymitis: ICD-10-CM Code N45.1

Acute epididymitis is inflammation in the epididymis; the pain is very sharp. It is highly associated with Chlamydia trachomatis and Neisseria gonorrhoea bacteria. This can also be due to the dysfunction in voiding, congenital abnormalities of the lower genitourinary tract, tubercular etiology, and coliform bacterial. Some of the common symptoms of the condition may include pain during sexual intercourse, bleeding when climaxing, penile discharge, pain in the testes, and painful urination (Zhao et al., 2020). I would not consider this since the patient did not have penis discharge, blood in the semen, or painful urination. From the information given, the patient was not sexually active.

2. Hernia

An incarcerated inguinal hernia may equally have its onset accompanied by pain and vomiting. There may also be signs of erythema and edema of the scrotum. Nevertheless, the testicles will be normal, and the cremasteric reflex is intact, which makes this a less probable stand-alone hypothesis (Shakil et al., 2020). Hospital admission is mandatory, especially in cases of incarceration; this is due to the increased risk of bowel ischemia and its implications.

3. Urolithiasis

The differential diagnosis should be included because the following symptoms are associated with kidney stones: the onset of the pain may be abrupt and sharp, and the patient may even develop vomiting. The physical findings of the illness may include the following: if the patient looks agitated, there is CVA tenderness, which might be unilateral. Similarly, haematuria might be noted (Abdurakhmanovich et al., 2021).

4. Torsion of the testicular appendage: ICD-10-CM Code N44.03

This is an emergency status whereby the anatomical structure is torsion adjacent to the testicle. The twisting is considered the major reason for acute scrotal pain, and in most cases, it affects the firstborn children in their pre-pubertal stage. Usually, a man affected by the condition will experience gradual development of pain in the scrotum and have a "blue sign." When the vestigial appendage twists, the testicle is unable to receive blood. It occurs suddenly without any cause, and if it is not treated within six to twelve hours, the testicle may be lost (Tanaka et al., 2022). The following symptoms may be associated with the illness. If the patient has experienced sharp and severe pain in the testicles, the inflammation may not be noticeable and is not accompanied by vomiting and nausea.

Laboratory and Diagnostic Tests

Urinalysis: If the patient does not present clinical signs of testicular torsion, a culture, and urinalysis might help rule out the possibility of urinary tract infection or epididymitis as a cause of testicular pain. Common laboratory investigations like urinalysis are often not revealed in testicular torsion.

Complete Blood Count: Patients with torsion have an increased WBC count.

CT Abdomen/Pelvis without contrast: Imaging tests, for example, ultrasound, CT scan, and X-ray, help the healthcare provider to determine if the patient has any underlying abnormalities that cause the symptoms.

Surgical intervention: Testicular torsion will necessitate surgical intervention to correct the problem. Despite detorsion by the healthcare provider, surgery will still be needed to prevent the situation where torsion will occur again.

Consults: A pediatrician or urologist should be consulted if the child has severe testicle pain for a few days. Further, the patient should seek medical attention if the hospital begins to have a high fever or if they find blood in their urine.

Treatment

Pharmacological

To manage pain, the patient may be prescribed over-the-counter medications, including ibuprofen, aspirin, and acetaminophen. In this case, anti-anxiety and analgesic medications play an essential role in alleviating testicular pain, ensuring that the patient remains calm and can better tolerate other forms of treatment. For instance, ibuprofen may be taken orally every 6 to 8 hours as needed for pain relief. Additionally, antiemetics such as Compazine can be prescribed at a dose of 10 mg orally once a day to help reduce feelings of nausea and vomiting, further enhancing the patient's comfort during treatment.

Non-pharmacological

Patient should be advised to wear loose clothing. Ice should be used to reduce pain and swelling of the scrotum.

Health Promotion

From the research, it is crucial to point out that some men may be shy when it comes to speaking or disclosing to a person any problem they have with their testicles. Boys and men should be taught the need to seek medical examination if they feel there is an issue with the testicles. Many people, especially the youth, have the impression that testicular pain specifically affects the old generation. In this aspect, there is a need to educate men and the general population on the various types of testicular pains and why one should seek early treatment once he feels that all is not well. Sadly, the issue of testicular pain is the one that men are rather shy about, and that is why they do not consult a healthcare professional. Men, in particular, must be reassured that even if they are through the worst of it, the conditions they are going through can be managed. They should be more assertive in speaking out about their problem with the healthcare practitioner and look for medical attention in case of any testicular pain.

Patient Education

The public should be informed that any person suffering from testicular pain should seek medical attention early enough. On the same note, people should understand that testicular pains can wake up individuals of any age group, from the young to the elder. Hence, there is a need to eradicate this negative attitude that testicular diseases only affect old people. There are several cases where people experience testicular pain, including testicular torsion, acute idiopathic scrotal edema, and inguinal hernia, and this is where the spermatic twists and reduces the blood supply to the testicles. The patient should also be informed on how to manage testicular pain at home if the situation arises. For example, they could refrain from lifting heavy items and performing tasks that require less exertion. In the same regard, research shows that sitting in a hot bath could help in the regulation of blood circulation. Last but not least, the members of the society must be taught how to spare themselves from the sickness.

Follow Up

The parents should be advised to check their son's health condition. They should ensure that the son is getting an adequate amount of rest. In case the scrotum turns red or the son has a fever, the parent should seek immediate emergency medical attention.

References

- Abdurakhmanovich, K. O., Egamberdievna, S. N., & Amandullaevich, A. Y. (2021). Ultrasound diagnosis of urolithiasis. *Central Asian Journal of Medical and Natural Science*, 2(2), 18-24.
- Jacobsen, F. M., Rudlang, T. M., Fode, M., Østergren, P. B., Sønksen, J., Ohl, D. A., & Jensen, C. F. S. (2020). The impact of testicular torsion on testicular function. *The world journal of men's health*, 38(3), 298.
- Shakil, A., Aparicio, K., Barta, E., & Munez, K. (2020). Inguinal hernias: diagnosis and management. *American family physician*, 102(8), 487-492.
- Tanaka, K., Kato, H., Nikai, K., Mikami, T., & Okazaki, T. (2022). Testicular appendage torsion in children. *Pediatrics International*, 64(1), e15010.
- Zhao, H., Yu, C., He, C., Mei, C., Liao, A., & Huang, D. (2020). The immune characteristics of the epididymis and the immune pathway of the epididymitis caused by different pathogens. *Frontiers in immunology*, 11, 2115.

Human Case Week #10

History of Present Illness

Category	Data entered by Errette Fenelon Merantier
Reason for Encounter	Chief complaint: "Testicular pain"
History of present illness	The patient is a 13-years-old child who presented at the clinic with his father the chief complain of which is testicular pain. The patient described that he first experienced a sudden pain in his left testicle two hours ago while he was playing basketball match. He complains of pain that lasts continuously for some time and the pain increases when he is moving or walking. He is also reported having nausea and had vomited once. He has not taken any medication for the pain. The patient self-reported the pain as mild to severe at the pain scale of 0-10 and rated the pain 9 according to the usual severity level.

Past Medical History

Category	Data entered by Errette Fenelon Merantier
Past Medical History	No past medical history
Hospitalizations / Surgeries	Patient has not undergone any surgery

Medications

Category	Data entered by Errette Fenelon Merantier
Medications	Patient is not taking any medications

Allergies

Category	Data entered by Errette Fenelon Merantier
Allergies	No known allergies

Preventive Health

Category	Data entered by Errette Fenelon Merantier
Preventive health	Immunization is upto date

Family History

Category	Data entered by Errette Fenelon Merantier
Family History	Father is diagnosed with blood pressure.

Social History

Category	Data entered by Errette Felon Merantier
Social History	Family life is normal. Reports feeling safe at home. Active lifestyle. Plays with other children

Review of Systems

Category	Data entered by Errette Felon Merantier
General	A and O X 4
Integumentary / Breast	Skin: Dry and warm skin without any lesions appreciated clinically. Elastic and non-tenting. Smooth, flat nails, with no ridges, pits, or signs of peeling.
HEENT / Neck	<p>Head: Percussion: No temporal artery tenderness; Palpation: Maxillary and frontal sinuses non-tender bilaterally; Facial strength and symmetry: The face is symmetrical with equal eye closure and smile.</p> <p>Eye: The visual acuity in each eye is 20/20, and the visual field is congruent with the examiners in all directions. The following inspection shows no ptosis, erythema, or swelling of the eyelids; conjunctiva are pink and no discharge; sclera are of normal color and not icteric; no edema, redness, tenderness or lesions are appreciated in the orbital. Pupils are normal, reactive to light, and accommodation bilaterally—normal ocular motor test. In the fundoscopic exam, the optic disks are well-defined, while the red reflex is observed in both eyes.</p> <p>Ears: Aural canal normal with no sign of cauliflower deformation, lesions, tumor formations, or redness. Tympanic membranes are intact, pearly-grey right and left without erythema, bulging, or any loss of landmarks; erythema is absent from both ear canals. Audiometry shows that hearing is normal on both sides.</p> <p>Nose: no discharge or polyps</p> <p>Throat: Mouth/pharynx inspection: There was no erythema or exudates of the pharynx, no masses or tenderness when palpating the tongue, patient had symmetric protrusion of tongue and normal tongue motility. Soft palate elevates correctly, and any speech phonation and articulation are correct. The patient can bite and gnash teeth, and adequate muscle bulk and tone of the mandible.</p> <p>Neck: There are no signs of injury, abnormality, or lesions from the neck examination, and the trachea is central and mobile. The neck examination reveals cervical lymph nodes that are mobile, non-tender, pea-sized, firm, and bilateral. Free-floating thyroid on palpation without any palpable masses, tenderness, nodules, or glandular enlargement is documented. Carotids bilaterally: no murmurs, clicks or other sounds heard through the stethoscope. JVP is less than 3cm above the sternum.</p>
Cardiovascular	Cardio: PMI is quarter-sized, active, and pounding at the 5th intercostal space in the midclavicular line. On auscultation, the heart rate is normal. The margins of the aorta are 2cm by palpation. No bruits were audible on auscultation in the abdominal or femoral arteries.
Respiratory	Chest/Respiratory: No abnormalities noted during auscultation of the lungs, Lungs clear to auscultation bilaterally. No lifts or accessory muscle use, scars, moles, rashes, erythema, or ecchymosis were noted during the inspection of the anterior and posterior thorax (breasts excluded). No abnormalities or rotations were palpated in the anterior and posterior chest wall, and no heaves, thrills, masses, or crepitus. The anterior lung fields are dull, the left anterior chest (heart) and right lower chest (liver) are percussible and rest of the lung fields are resonant but not hyper resonant.

Gastrointestinal	Abdomen: Upon assessment of the abdomen, there are no visible scar, mole, mass, rash, erythema or ecchymosis present. Auscultation of the abdomen was within normal range. On light or deep abdominal palpation, the abdomen is not tender and there are no palpable masses. The liver is 8cm at the midclavicular line and the edge of the liver can be easily felt just beneath the costal margin. The spleen is not palpable. Negative Murphy's sign. Negative rebound tenderness.
Genitourinary	The patient relates left-sided testicular pain characterized by a dull type of pain that has been present for two hours, limited to the left testicle without spreading. He does not complain of dysuria or frequency or urgency of micturition, or haematuria or nocturia or incontinence at all. The patient has reported that no area of the body shows signs of swelling, redness or any other abnormalities. He also stated that he has no discharge from the penis, scrotal enlargement, lumps in groin or flank pain. He has never had any problems with urinary tract infections, kidney stones or sexually transmitted diseases and he has no history of testicular problems or operations. Patient is not sexually active. The patient has no sign of fever or chills.
Musculoskeletal	<p>From palpation, cervical, spine, and paraspinal muscles; no sign of tenderness or spasm on the right or left side. Cervical spine range of motion (non-meningeal): There is no signs and symptoms of any pain, weakness during both passive and active movements including flexion, extension, lateral bending and rotation of the cervical and lumbar vertebrae. Turning head against the resistance/evaluation of shoulder is balanced movement showing no weakness on both sides. Negative findings from the cervical compression test as the patient did not exhibit any discomfort.</p> <p>Elbows: No swelling, erythema, ecchymosis, tactile rashes, or cutaneous/mucosal lesions or objective signs of fasciculations or any muscle loss on arm examination. The DTR of biceps, triceps, and brachioradialis are 2+. Active ROM of shoulders is 5/5 and Passive ROM is normal.</p> <p>Palpation also revealed bilateral bony point tenderness over the epicondyles, tendinous attachment areas, and olecranon bursa. There is no limitation to active ROM of bilateral elbows, it is fully active 5/5, however, there is mild limitation to passive ROM. Negative for edema, pallor, hair loss, erythema, rash, ulceration, lesions, or ecchymosis of the bilateral lower extremities on inspection. Pain, light touch, vibration, proprioception, and temperature sensations are preserved in right and left legs. No dorsalgia in passive flexion of legs or dorsum of feet on either of the sides.</p> <p>Knees bilaterally: No palpable swelling, tenderness, or formation of a mass on the region being examined.</p> <p>Patellar, Achilles DTR is 2+</p>
Allergic / Immunologic	Patient denies having any allergies
Endocrine	The patient does not report extremity sensitivity to hot or cold, changes in sweating or increased urge to sweat or note any significant changes in weight. There were no symptoms of polyuria, polydipsia, or polyphagia. He does not have past medical illnesses such as thyroid disease, diabetes, or any other endocrine diseases, and he says he has not noticed any changes in his hair or skin.
Hematologic / Lymphatic	Warm and dry, with no lesions seen upon inspection. Elastic and non-tenting. Nails are with no ridging, pitting, or peeling
Neurologic	Equal sensitivity and discrimination in the tested areas (Forehead, cheek jaw, nose); Brudzinski and Kernig's sign negative; Sensation present to pain, light touch, vibration as well as temperature on left and right thorax and back. Negative

	Babinski sign. Sensory examination of the legs reveals no loss of sensation to pain, light touch, vibration, proprioception, and temperature in the lower limbs on both sides.
Psychiatric	The patient is not experiencing any depression, anxiety, mood swings, hopelessness, or anything similar. No prior thought of suicide, hallucination or any delusional episodes are reported. None in the change in sleep patterns, energy, or concentration in the last weeks. The patient has no history of ever being hospitalized for any psychiatric condition, nor has the patient ever taken any psychiatric medications.

Physical Exams

Category	Data entered by Errette Fenelon Merantier
General	Patient appears alert, and oriented x 4. No grimacing, respiratory or emotional distress noted.
Skin	Skin is warm and dry. No lesions noted. Skin distribution pattern is typical for patient's young age and gender. Capillary refill is less than 3 seconds in both fingers and toes.
HEENT / Neck	The head is normocephalic and atraumatic. The scalp is smooth and does not have signs of inflammation, swelling, or thickness, clusters, nodules, swellings, lesions, eruptions, neoplasms, or other lesions. Further, there is no sign of eyelid ptosis, erythema or swelling noted. Conjunctiva is pink without any secretion. Sclerae is anicteric. There is no edema, redness or tenderness noted on the orbital area. Both pupils are brisk and reactive to light. Normal appearing external ears. No deformities, or edema noted. No discharge noted. Normal appearing external auditory canals. Tympanic membrane translucent, non-injected, and pinkish gray in color. No scarring or discharge noted. Oropharynx not injected. Clear mucosa. Tonsils without exudate. Tongue is painted pink and is in middle of the mouth. No swelling or ulcerations. Intact Gag reflex. No hoarseness noted. No abnormal stinking smell of the breath associated with foul swellings. Neck: No lesions, or edema noted. No stiffness or pain noted. Normal movements of the neck observed in all directions. Thyroid gland is seen to shift with the motion of swallowing. The cervical, supraclavicular, and axillary chain regions showed no pathologically enlarged lymph nodes.
Cardiovascular	Chest is balanced and no scars are marked on the skin. No cardiac heaves or lifts. No edema noted. PMI is insignificant and located at the left midclavicular line in the fifth intercostal space. Normal Jugular venous pressure. On auscultation, present with normal HR and rhythm, S1 and S2 audible, no murmur, click, gallop or rub. No separation of the heart sounds was audible.
Chest / Respiratory	Anterior and posterior chest: Thorax is not infiltrated and there is no deformity. The respiratory movements are normal and symmetrical, the diaphragm has a good excursion. There was no palpable localized tenderness at any costochondral point. No evident rib fractures. No vertebral tenderness. The anterior lung fields are passive and reverberant. The rest of the lung fields are resonant. No abnormalities can be seen or heard from all lungs fields to auscultation. There is no wheezing, crackles or stridor heard. Other observed changes include increased symmetry of the expansion and the

	absence of dyspnoea.
Abdomen	Abdomen is soft to palpation. Nontender to upper quadrant and epigastric palpation. No patient's symptoms are observable with applied epigastric pressure. Bowel sounds are normoactive in all 4 quadrants. No masses or bruits were noted.
Genitourinary / Rectal	Clinical examination of the external genitalia does not show any signs of oedema, redness or skin lesions. The left testicle is slightly enlarged and tender, aching on palpation according to the patient, however no lumps or abnormality could be felt. The left testicle is not significantly larger or smaller than the right testicle, or elongated or round. The epididymis and spermatic cord on the left side are not swollen and there is no tenderness and abnormality felt on both sides. There is no sign of hernias or inguinal lymphadenopathy on physical examination. Urine meatus is healthy with no sign of vaginal discharge or mucosal lesions observed.
Musculoskeletal / Osteopathic Structural Examination	The back is considered symmetrical and without any deformities. There was no sign of tenderness or spasm of the paraspinal muscles. Patient maintains a normal posture and has a steady gait. Strength is now 5/5 bilaterally. Normal mobility of arms and legs. No pain noted during ROM.
Neurologic	Adaptive behavior, relevant to person, place, time, and circumstances. Pupils corresponding to light and focus. The facial expressions are bilateral or mirror-shaped since the face is divided between the right and left. Head turning and shoulder shrug were preserved to resistance. Tongue is midline, is normal in its mobility, and has no signs of atrophy. Speech is fluent and clear. Triceps, biceps, brachioradialis, patella deep tendon reflexes are having a brisk response which is 2+.
Psychiatric	Calm and in a good emotional state. Concentration level and attention are appropriate. No increased level of agitation or extreme sadness.
Lymphatic	Abdominal examination reveals no enlarged lymph nodes. Cervical, supraclavicular, axillary and inguinal lymph nodes are absent and non-tender on both sides. The patient has no reported signs of enlargement, redness, heat or pain over the affected lymph nodes. No hepatosplenomegaly or other signs of lymphatic or systemic infection are appreciated.