

***A Case Study of Jaundice
Zelda Shapiro***

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Presentation

- **70 year old Female presents to the Emergency Department with:**
 - Abdominal Pain**
 - Fever**
 - Chills**
 - Yellow Eyes**

Presentation

- **You see Mrs. Shapiro on the Examination Table in a slightly bent over position with her hand touching her right upper abdomen**

She Says:

- **“Doctor, I have this Terrible pain in my side [indicates right upper Abdominal quadrant].**
- **What Do you Want to Ask now?**

PQRST--QST

- **It's been there before but it has not been this bad. It feels like a knife going right through to my back. Sometimes it gets worse for a while and then lets up for a little, but it never goes away completely.**
- **It's a 9 on a Scale of 0-10 and having my first child was a 10.**

PQRST--PR

- I felt a little queasy in my stomach this morning when I got up, but the pain really began after I ate breakfast [bacon, eggs, fried potatoes].
- Sometimes the pain seems to go into my right Shoulder.

Questions

- **Would you ask the Patient what she thinks is going on?**

She thinks:

- **I thought I was coming down with a bladder infection because my urine has been very dark the last few days.**
- **But this time I don't have to go to the bathroom every half hour and I don't have burning when I urinate.**

She Says:

- **I had some fever last night, about 101 degrees**
- **I feel like I have to throw up but I can't and my husband says my eyes are yellow today.”**

Questions

- **What History do you need to know?**
- **What Questions do you ask?**

Past History

- *Past Medical History:* Unremarkable
- *Injuries:* None
- *Immunizations:* Last Td 5 years ago
Flu-vac last fall
- *Medications:* Aspirin for Fever,
Frequent Antacids

Past History

- *Allergies*: Denies any significant drug or environmental allergies.
- *Surgical History*:
Appendectomy at age 8.
- *Hospitalizations*: Only for childbirth and Appendectomy

Questions

- **Anything you need to know about the patient's Lifestyle and Behaviors?**

Behaviors

- **Diet**: Has had no appetite for the past 2 weeks. Last good meal was from Kentucky Fried Chicken 1 1/2 weeks ago. Enjoys all types of food.
- **Exercise**: Walks a half a mile, three days a week at the mall
- **Sleep patterns**: No problems

Behaviors

- Caffeine: Six cups of coffee a day.
- Alcohol: She and her husband have a bottle of wine with dinner.
- Nicotine use: None, never smoked.
- Substances: None used

Social History

- **Ms. Shapiro was born and raised in Camden, OH. And at age 19 moved to Athens, OH to work at OU.**
- **She quit her job after her first of six children, all in good health.**
- **She lives with her husband, a retired electrician.**

Questions

- **Is there anything about the Patient's Family History you need to know?**

Family History

- **Patient has no siblings.**
- **Father died of prostate cancer at 60.**
- **Mother died of renal cancer at 59.**
- **No family history of Jaundice.**

Questions

- **How would you approach the System Review?**
- **Your Order and Questions?**

Review of Systems

- **Review of Systems is Unremarkable except for.....**

GI Review of Systems

- **Intermittent bouts of right upper quadrant pain for 6-8 months,**
- **Occurring about once every two months, lasting 6-8 hours and usually following a fatty meals.**
- **Stools have been whitish recently.**
- **No prior history of Jaundice.**

Review of Systems

- **She denies chronic indigestion, pyrosis, food dyscrasias, anorexia, recurrent nausea, vomiting, diarrhea, constipation, hematemesis, or recent weight loss.**

What's Next?

The Physical Exam

- **How would you Approach the Physical Exam?**
- **What's First?**

Vital Signs

- **Temperature:** 102 °F
- **Height:** 65 inches
- **Pulse:** 110 bpm
- **Respiration's:** 22 pm
- **Blood Pressure:** 150/90 mmHg
- **Weight:** 190 lb.

The Physical Exam

- **In what order would you examine the patient?**

Physical Examination

**Eyes: Conjunctiva have a
yellowish appearance**

**Skin: Questionable yellow
coloration; no rashes or other
skin lesions. Decreased skin
turgor. Skin very dry.**

Physical Exam

- **Does the type of lighting in the room affect your perception of skin yellowing in Jaundice?**

Question

- **What causes the Skin and Sclera to turn yellow in Jaundice?**

The Physical Exam

- **How would an Examination of the Heart and lungs be helpful in this Patient?**

Physical Examination

- **Heart**: Heart sounds are distant. Rate of 110 without murmur noted.
- **Lungs**: Clear and equal bilaterally to auscultation and percussion.

The Physical Exam

- **How do you Examine a Patient's Abdomen when in Pain?**
- **What do you do?**

Physical Examination

- **Ascultation before Palpation**
- **Abdomen:**
 - Bowel sounds quiet
but present**
 - Tender right upper
Quadrant**
 - No rebound tenderness**

Question

- **What is the Significance of having Tenderness but not Rebound Tenderness?**
- **What Types of Pain occur in the Abdomen and what are their Sources?**

Physical Examination

- Rectal:
 - No masses or tenderness
 - Hemocult negative
 - Stool Pale in Color

Question

- **What is your Differential Diagnosis at this Point?**

Other Information

- **What Labs do you want to order?**
- **What would they tell you?**
- **Would they Change your Diagnosis or Treatment?**

CBC

- *Hb* *13.6 g/dl* (*12-16 g/dl*)
- *Hct* *40.2 %* (*36-45%*)
- *RBC* *4.8 X 10⁶/ml* (*4.2-5.0 X*
10⁶/ml)

CBC

- *WBC* $14.6 \times 10^3/\text{mm}^3$ (4-11 $\times 10^3/\text{mm}^3$)
- *PMN* 90% (40-75%)
- *Lymphs* 8% (15-45%)
- *Monos* 2% (1-10%)

LFT's

- *AST* *98 IU/l* (*11-47 IU/l*)
- *ALT* *102 IU/l* (*7-43 IU/l*)
- *Alk Phos* *345 IU/l* (*38-126 IU/l*)
- *Bilirubin*
- *Total* *6.0 mg/dl* (*0.2-1.3 mg/dl*)
- *Direct* *5.4 mg /dl* (*0.0-0.2 mg/dl*)

LFT's

- **What do the Elevations of AST, ALT, and Alkaline Phosphatase Mean?**
- **How do Direct and Total Bilirubin Differ?**
- **What are their Sources?**

Urinalysis

- **What would you Expect to find in this Patient's urine?**

Urinalysis

- *Appearance:* *dark yellow* (yellow)
- *Acetone:* *negative* (negative)
- *Glucose:* *negative* (negative)
- *pH:* *8.0* (4.6-8.0)
- *Spec. grav.* *1.024* (1.003-1.030)
- *Urobilinogen:* *Positive* (negative)

Question

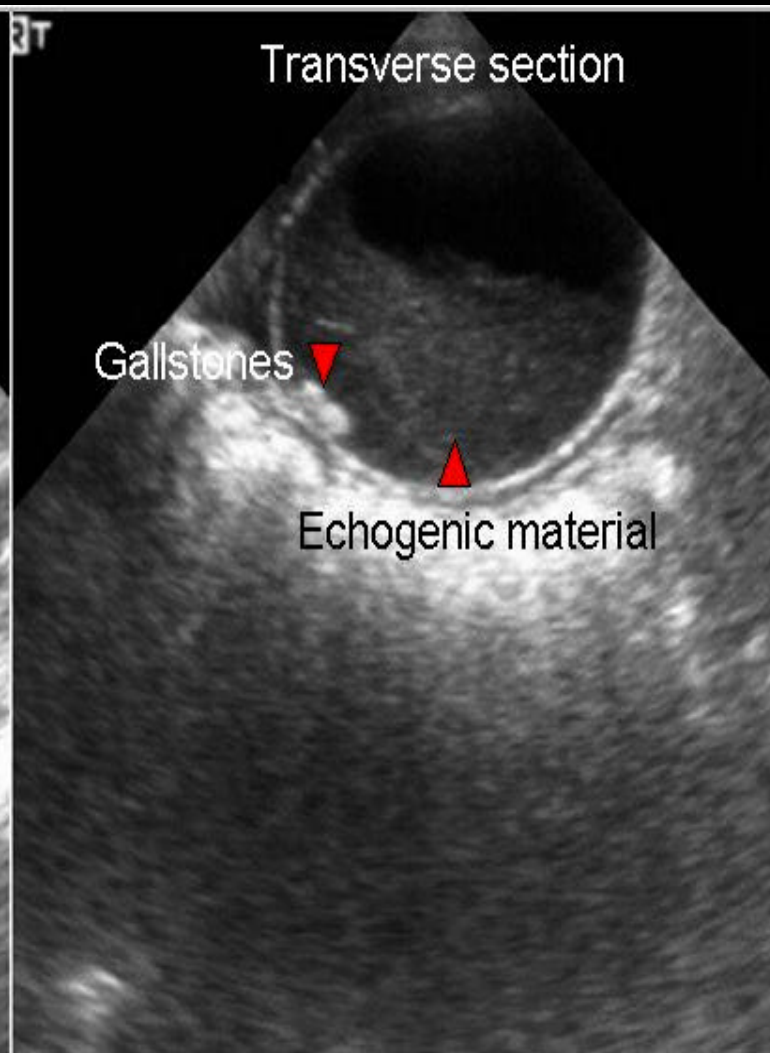
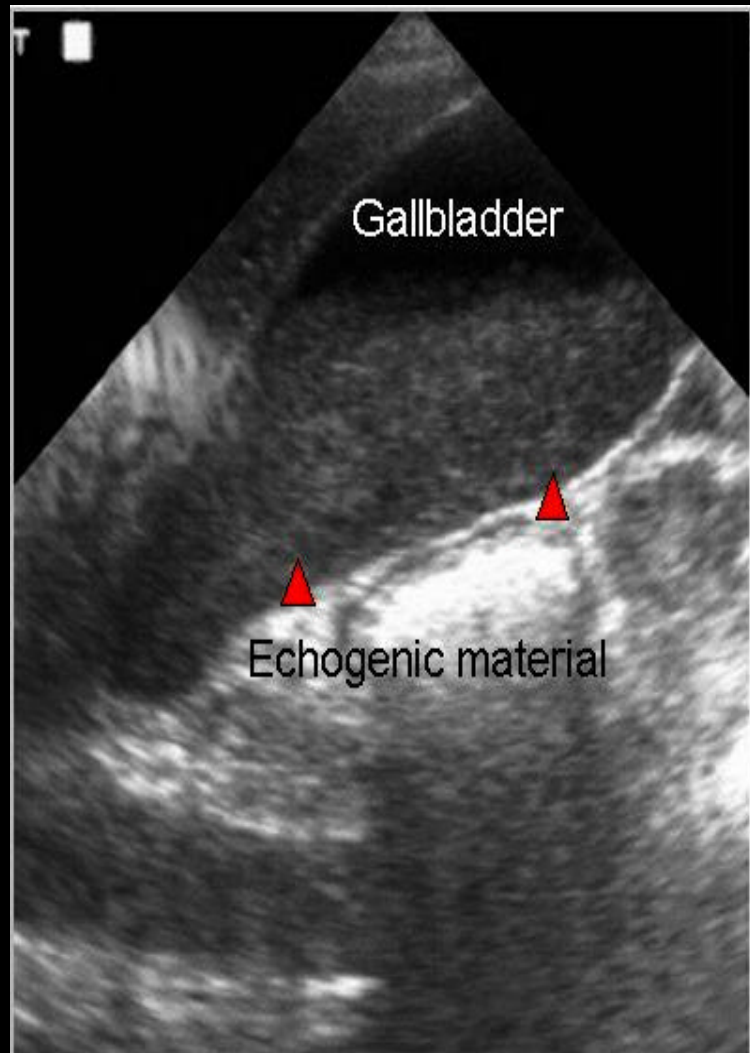
- **What is your Differential Diagnosis at this Point?**
- **Did the Lab Values help?**

Question

- **What is Charcot's Triad?**

Labs

- *Gallbladder Ultrasound:*
 - Common Bile Duct Dilatation*
 - Cholelithiasis with Multiple Small Stones*
 - Multiple Small Stones in the Distal Common Bile Duct*
 - Liver & Pancreas unremarkable*



Labs

- **What Other Tests May be Needed and Why?**

Labs

- *Blood cultures*: *Pending*
- *Chest X-ray*: *No acute changes*
- *EKG*: *Non-specific ST changes, sinus Rhythm*
- *Protime*: *11.4 sec. (11-14 sec.)*
- *APTT*: *24 seconds (22-37 seconds)*

Treatment

- **What options for Treatment are there?**
- **What Rationale do you have for Each Treatment?**

Treatment

- **The Patient Undergoes ERCP**
(Endoscopic retrograde
cholangiopancreatography)
with Improvement in her pain and
Jaundice after stone removal.
- **Four weeks later she has an Elective
Lapasopic Cholecystectomy with
Operative Cholangiogram.**