NU 514 Spring 2011 Case Scenario: Abdomen

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1. **CASE STUDY HISTORY AND ILLNESS PRESENTATION**

**Chief Complaint**: “I have pain in my stomach”

**History of Present Illness**: Ms. G. a 42 year female housewife who makes appointment because she has been experiencing pain in her upper abdomen for the past 3 months. Describes the pain as an “ache” that sometimes radiates into her right upper back and right shoulder. The pain gets worse after eating fatty or greasy foods, so she has eliminated these foods. She feels nauseated when the pain occurs and sometimes vomits. Denies fever/chills/weight loss, chest pain, diarrhea, constipation, melena, rectal bleeding and dysuria. She has no exposure to anyone being sick.

Ms. G is healthy, does not smoke, drink or use illicit drugs

Family history is significant for HTN in mother and diabetes in father. Her mother had gallbladder surgery in her mid-40s.

**Actual findings on physical examination:**

* Alert, obese, middle aged woman sitting comfortably on the exam table
* BP=120/80 HR=80 Respirations=16 Temp=99.2
* Skin: No rash
* HEENT: Normocephalic, atraumatic, sclera white, conjunctivae clear, Pupils equal, round, and reactive to light and accommodation, Constrict from 5mm to 3mm.
* Neck: supple without thyromegaly, no lymphadenopathy.
* Thorax & Lungs: Thorax symmetric, with 2:1 AP radio. Lungs resonant and clear
* Cardiovascular: JVP 6cm above right atrium, carotid upstrokes brisk, without bruits. PMI tapping and nondisplaced S1/S2 regular no murmurs
* Abdomen: Obese, with active bowel sounds, soft, tender to palpation in right upper quadrant during inspiration with liver span of 9 cm in right MCL. Liver edge is smooth and palpable @ 1finger-bretdth below the RCM. Spleen not palpable. No CVA tenderness No femoral/abdominal bruits.

1. **IDENTIFY EXAMINATION(S) TO BE PERFORMED AND GIVE RATIONALE FOR EACH SYSTEM**

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| **System or**  **Area Examined** | **Purpose** | **Rationale** |
| General Survey | * To get overall idea of client’s appearance & behavior, emotional stability, cognitive abilities mentation. * To verify chief complaint / primary purpose(s) of visit. * To capitalize on client education opportunities. | * Provides information regarding client’s cognitive, mental and emotional abilities. * Identify client’s level of self-care and allows general discussion of healthy habits (or the lack of it). * Conversing with client provides opportunity to explore multiple risk factors. * Improves provider’s understanding of recent signs and symptoms or changes in condition. * Client may reveal additional information – signs and symptoms which she felt were not related to the CC or insignificant may now be discovered – these may be of interest to the provider & assist in making definitive diagnosis. * Provide multiple teaching opportunities |
| Vital signs | * Gather objective data regarding client’s overall general health | * Serve as real-time indicator of client’s wellness * Useful to assess for s/s of other disease processes (or to monitor chronic health concerns). |
| Skin |  |  |

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| **System or**  **Area Examined** | **Purpose** | **Rationale** |
| Thorax and Lungs | * Assess patency of airways * Assess effectiveness of respiration * Assess characteristics of breath sounds * Determine risk factors | * Risk factors for respiratory disability need to be assessed: * **Obesity** effects respiratory competency (Seidel, 2011, p.345) * Is patient sedentary; what are occupational exposures; and what is family history of respiratory diseases? |
| Cardiovascular | * Assess circulation of blood both centrally and peripherally * Assess characteristics of pain (chest pain versus upper abdomen pain) * Assess cardiac cycle and electrical activity * Determine risk factors | * **Abdominal pain** and **nausea/vomiting with pain** can be heart related (Epocrates 2010) * What is the interpretation of 12 lead? * Client is **obese** and has **family history of hypertension and diabetes** |
| Abdomen | * Assess for signs and symptoms of an abdominal disease process * Assess characteristics of pain (chest pain versus upper abdomen pain) * Determine risk factors | * **Upper abdominal pain** that **radiates into right upper** **back** that **occurs after eating** is most often Biliary pain (Seidel, 2011, p.389) * Risk factors: * **Obesity** * What is ethnic background; Pt is **42--**when was last menstrual period; what is diet? * Major risk factors for cholecystitis: “fair, **female**, **fat** and **fertile**” (Medscape 2010); **Mother had gallbladder surgery--**Gallstones run in families (University of Maryland Medical Center Medical Reference 2010) and with people over 40 |

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| **System or**  **Area Examined** | **Purpose** | **Rationale** |
| Head and Neck including Lymphatic system |  |  |
| Breasts and Axillae |  |  |
| Female Genitalia |  |  |
| Anus and Rectum |  |  |

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| **System or**  **Area Examined** | **Purpose** | **Rationale** |
| Peripheral Vascular/Extremeities |  |  |
| Musculoskeletal |  |  |
| Nervous System |  |  |

1. **IDENTIFY PHYSICAL FINDINGS TO HELP DETERMINE DIAGNOSIS**

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| **System or**  **Area Examined** | **What are we looking for to determine the diagnosis?** |
| General Survey |  |
| Vital signs |  |
| Skin |  |

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| **System or**  **Area Examined** | **What are we looking for to determine the diagnosis?** |
| Thorax and Lungs | * Adventitious breath sounds, abnormal respiratory pattern, poor oxygenation and accumulation of carbon dioxide may indicate lung disease—**none noted** |
| Cardiovascular | * Congestion in the central or peripheral systems, palpable lift/heave/thrill/displacement of apical pulse, dysrhythmias, extra heart sounds, inappropriate heart sounds according to auscultatory area, abnormal JVP, abnormal EKG—**none noted** |
| Abdomen | * Abnormal surface characteristics, contour (abdominal distention), or movement; character of bowel sounds; additional sounds and bruits; enlargement of liver or spleen; muscle spasm, masses, fluid, and tenderness of the organs of the abdominal cavity; ascites; pain; rebound tenderness; characteristics of bowel movements—**tender to palpation** |

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| **System or**  **Area Examined** | **What are we looking for to determine the diagnosis?** |
| Head, Neck and Lymphatic system |  |
| Breasts and Axillae |  |
| Female Genitalia |  |
| Anus and Rectum |  |

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| **System or**  **Area Examined** | **What are we looking for to determine the diagnosis?** |
| Peripheral Vascular/Extremities |  |
| Musculoskeletal |  |
| Nervous System |  |

1. **LIST 3 DIFFERENTIAL DIAGNOSES WITH RATIONALE**

Based on the information provided, the following differential diagnoses are considered:

1. Cholecystitis and Biliary Colic
2. Acute Pancreatitis

* Facts about pancreas-
  + Acinar cells of the pancreas produce digestive juices containing inactive enzymes for the breakdown of proteins, fats, and carbohydrates. Islet cells scattered throughout the pancreas produce the hormones insulin and glucagon. Head of pancreas in RUQ. Body of pancreas in LUQ.
  + Definition of Acute pancreatitis: Acute inflammatory process in which release of pancreatic enzymes results in glandular autodigestion (Seidel et al., 2011, p. 528)

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| **Patient Presentation** | **Cholecystitis** | **Pancreatitis** |
| Upper abd pain, achy, x 3 months; tender/guarding with palpation | **X** | **X –upper abd**  \*Sudden onset, knifelike |
| Pain radiates to R upper back/shoulder | **X** | **X** -Radiates to back;  also epigastric |
| BP=120/80  HR=80  Temp=99.2 | **X** | **X** –? Hypotension if p unknown/untx HTN?  -Tachycardia  **X;** low-grade fever? |
| N/V | X | X |
| No ETOH |  | Often ETOH abuse |
| No labs |  | Elev. Pancreatic enzymes (amylase/lipase) |
| + Murphy’s sign | X | + Cullen sign  + Grey-Turner sign |

Acute Pancreatitis:

* Cardinal symptom of acute pancreatitis is usually steady, sudden-onset **abdominal pain radiating to the back**, can be knifelike in nature. Gradually intensifies in severity until reaching a **constant ache**.
* Initiating event may be anything that injures the acinar cell and impairs the secretion of zymogen granules, such as alcohol use, gallstones, and certain drugs. May occur as result of untreated or unrecognized biliary disease including cholelithiasis.
* **Upper abdominal pain**, epigastric, usually **more right** or left, depending on area of pancreas involved; **radiates directly through to back** in half of cases.
* **Nausea, vomiting** and alcohol intake are often present.
* Typical signs include epigastric tenderness, **fever**, and tachycardia.
* Elevated amylase and/or lipase levels are essential for diagnosis.

(Seidel et al., 2011, p. 528)

Diagnostic Testing-

* serum amylase
* serum lipase
* AST/ALT
* CBC and differential
* hematocrit
* arterial blood gas
* abdominal plain film
* chest x-ray
* ultrasound

Also consider:

* C-reactive protein (CRP)
* abdominal CT scan
* magnetic resonance cholangiopancreatography (MRCP)
* ERCP

Treatment Options for Acute Pancreatitis:

* initial resuscitation
* nutritional support
* calcium replacement
* magnesium replacement
* insulin
* antibiotics
* with gallstones: surgical candidates
* cholecystectomy
* with gallstones: nonsurgical candidates
* ERCP with sphincterotomy

(Gardner, 2011)

1. Peptic Ulcer
2. Small Bowel Obstruction- Medscape

* Abdominal pain (characteristic with most patients)
* Nausea
* Vomiting, which is associated more with proximal obstructions
* Abdominal distention difficult to assess with obesity
* Duodenal or proximal small bowel has less distention when obstructed than the distal bowel has when obstructed
* Hyperactive bowel sounds occur early as GI contents attempt to overcome the obstruction
* Proper GU and pelvic exams are essential
* Look for the following during rectal exam:
  + Gross or occult blood, which suggests late strangulation or malignancy
  + Masses, which suggest obturator hernia
* Gallstones (Maryland)

**References**

Seidel, H. M., Ball, J. W., Dains, J. E., Flynn, J. A., Solomon, B. S., & Stewart, R. W. (2011). *Mosby’s Guide to Physcial Examination* (7th ed.). St. Louis, MO: Mosby Elsevier.

Gardner, T. B. (2011). *Acute Pancreatitis*. Retrieved from http://www.medscape.com/acutepancreatitis