Identifying Data

Date:	07 / 15 / 2022
Time:	11:00 PM
Location:	QHC General Surgery
Patient Name:	I.V.
Sex:	F
DOB:	10 / 9 / 1965
Informant:	Patient
Reliability:	Reliable

Chief Complaint

Abdominal pain x 4 days

HPI

I.V. is a post-menopausal 56-year-old female with no significant PMHx or PSHx presents to the ED for abdominal pain x 4 days accompanied with nausea, episodes of bilious vomiting, and diarrhea. Patient reports the abdominal pain started abruptly after eating Chipotle 4 nights ago and has been worsening since then. She describes the pain as constant sharp and crampy sensations. Patient states the pain is diffusely over the abdomen and does not radiate elsewhere. Pain is rated 9/10. Patient denies any alleviating factors and says pain is exacerbated by upon eating. Patient reports no resolution of symptoms after unsuccessful attempts to manage pain with Tylenol. Admits to fatigue, inability to keep food down, multiple episodes of bilious vomiting, several loose stools, and obstipation. Denies fever, unintentional weight loss, flank pain, reflux symptoms, bloody stool, dysuria, hematuria, chest pain, SOB and recent travel or known sick contacts. Patient states she has never had pain like this before.

Good HPI – bilious vomiting and obstipation are telltale symptoms

Past Medical History

Present Illnesses:	Denies (Has not sought medical care in 20 years)
Past Illnesses:	Denies
Immunizations:	Up to date COVID-19 vaccine x 3 doses
Screening Tests:	Denies
Hospitalizations:	Denies
Medications:	Denies
Allergies:	No known allergies

Past Surgical History

Surgeries:	Denies, virgin abdomen
Transfusions:	Denies

Family History

Mother:	Deceased at 65 years old, HTN and DM
Father:	Living at 77 years old, DM and Alzheimer's
Daughter:	Living at 21 years old, Healthy

Social History

I.V. is a 56-year-old Lithuanian-American female living at home with her daughter in Queens. She is currently a single parent and a full-time custodian in an office building. She has not sought medical care in 20 years, since the birth of her daughter.

Habits: Denies current and past smoking, alcohol use, tobacco use, marijuana use, and illicit drug use.

Diet: She claims to have poor diet mostly consisting of carbs and meat. Tries to minimize salt and sugar intake.

Exercise: Denies regular exercise.

Sexual Activity: Not sexually active.

Review of Systems

Constitutional: See HPI. **Positive** for fatigue. **Negative** for activity change, weight loss, fever, chills, night sweats, malaise/fatigue.

Skin / hair / nails: **Negative** for changes in texture, excessive dryness, discolorations, redness pigmentations, ulcers, moles/rashes, pruritus, or changes in hair distribution.

Head: **Negative** for dizziness, vertigo, mild headache, swelling, light-headedness, or recent head trauma.

Eyes: **Negative** for visual disturbance, blurry vision diplopia, scotoma, eye fatigue, scotoma, halos, pruritus, lacrimation, photophobia, redness, or discharge.

Ears: **Negative** for deafness, pain, discharge, tinnitus, hearing aid use.

Nose / Sinuses: **Negative** for difficulty breathing, congestion rhinorrhea, discharge, epistaxis, nasal obstruction, trauma, pruritis, loss of smell.

Mouth / Throat: **Negative** for sore throat, post nasal drip, bleeding gums, sore tongue, mouth ulcers, voice changes, tooth pain, swelling, pain, dryness, loss of taste, or use of dentures.

Neck: **Negative** for neck pain, stiffness, decreased range of motion, trauma, localized swelling, lumps, or adenopathy.

Pulmonary — **Negative** for cough, sputum production, SOB hemoptysis, wheezing, cyanosis, orthopnea, PND.

Cardiovascular — **Negative** chest pain, palpitations, irregular heartbeat, syncope, or known murmurs / arrhythmias, pain in calves, ulcers, extremity swelling.

Gastrointestinal — See HPI. **Positive** for abdominal pain, distension, diarrhea, nausea and bilious vomiting . **Negative** for heartburn, pyrosis, dysphagia, unusual flatulence, eructations, jaundice, hemorrhoids, constipation, rectal bleeding, swelling.

Genitourinary — **Negative** for nocturia, urgency, frequency, hesitancy, polyuria, oliguria, dysuria, change in urine color, difficult urination, incontinence, hematuria, pyuria, dark brown urine, flank pain. OB status – postmenopausal.

Nervous — **Negative** for seizures, headaches, balance problems, dizziness, loss of consciousness, numbness, paresthesias, dysesthesias, hyperesthesia, ataxia, loss of strength, change cognition / mental status, weakness, or tremors.

Musculoskeletal — **Negative** for gain disturbance, chest pain, back pain, falls, deformity, redness, restricted motion, joint swelling, gout.

Hematologic — **Negative** for anemia, easy bruising or bleeding, lymph node enlargement, blood transfusions, or history of DVT/PE.

Endocrine — **Negative** for polydipsia, polyuria, excessive sweating or flushing, polyphagia, heat or cold intolerance, goiters, or hirsutism.

Psychiatric — **Positive** for anxiety in the setting of worsening abdominal pain. **Negative** for depression, OCD, memory loss, mental disturbance, suicidal ideations, hallucinations, paranoias, or delusions.

Physical Exam

Vitals
BP: 124/86 RA, Supine
RR: 18 breaths / min, unlabored
Pulse: 87 beats / min
O2 Sat: 99% Room air
Temp: 97.2 F oral
Height: 1.549 m (5’1)
Weight: 61.5 kg (135 lbs)
BMI: 25.62 kg/m2

General — Alert, awake, not in acute distress but ill-appearing. Appears to be stated age and well-developed.

Skin — Warm, moist, even texture, good turgor. No masses, lesions, deformities, scars, tattoos. No cyanosis, nonicteric. No discoloration, rashes, moles, pigmentations, bruises, macules, papules. Non-diaphoretic. Bilateral skin temperature consistently warm on all extremities.

. Head Unremarkable symmetry. Normocephalic, atraumatic, non-tender to palpation throughout. No seborrhea, lice, nits, dandruff. No masses, lesions, deformities on scalp. No swelling, trauma, tenderness to scalp on palpation.
No abnormal facies. No, lesions, mass, deformities, depressions. No swelling, edema, scars. No facial pain to palpation. No recent falls.

Nails Capillary refill <2 seconds throughout upper and lower extremities.
Appropriate shape, color for nails and nail beds. No lesions, clubbing, infection.

Eyes No signs of lesions, masses, deformities, discharge. Symmetrical OU. Sclera white, cornea and lens clear, conjunctiva pink without injection or discharge. No strabismus, exophthalmos, ptosis. No cataracts or scleral icterus.

Ears Symmetrical and appropriate in size. No lesions, masses, deformities, trauma, swelling on external ears.

Nose / Sinus Unremarkable symmetry. No lesions, masses, discharge, deformities, discoloration, erythema, ecchymosis. Nares patent bilaterally. Nasal mucosa pink & well hydrated. Septum midline without lesions / deformities / injection / perforation. Turbinates without erythema or edema. No foreign bodies.

Mouth Lips pink, moist, no cyanosis or lesions, swelling, fissures. Non-tender to palpation. Mucosa is pink, well hydrated. Gums are pink, moist. Tonsils are unremarkable and symmetric. Uvula midline. Hard and soft palette intact. Tongue is pink, well papillated. No masses, lesions, or deviations or injection. Oropharynx shows no erythema, masses, lesions, foreign bodies, discharge, exudates.

Neck Trachea midline rises well with swallowing. Symmetrical with no masses, lesions, scars or adenopathy. No abnormal pulsations or JVD noted. Supple, non-tender to palpation.

Thyroid Not enlarged and non-tender to palpation. No palpable masses, nodules, irregularities, cysts, thyromegaly. No palpable lymphadenopathy.

Lungs Pulmonary effort appears normal, no accessory muscle use. No stridor or respiratory distress. Chest expansion on respiration symmetrical and appropriate. No wheezes, diminished breath sounds. Clear to auscultation bilaterally. No signs of consolidation or fremitus. No tenderness noted.

Heart Regular rate and rhythm. Auscultation revealed normal heart sounds - S1 and S2 are normal and distinct with no murmurs, friction rubs, or gallops heard. Neck supple. No JVD present. No abnormal pulsations noted. No heaves or thrills or lifts on palpation. PMI palpable in the 5th intercostal space at midclavicular line. No chest wall tenderness.

Abdomen	Abdomen is distended. Abdomen symmetric with no bruises, varicosities, straie, lesions, masses, deformities, jaundice, ecchymosis, hernias, visible pulsations and peristalsis noted. Bowel sounds normoactive in all 4 quadrants with no aortic / renal / femoral bruits. Abdomen soft with no masses or protrusions. Tender to palpation diffusely over the abdomen with tenderness worse in LLQ. There is rebounding. No guarding noted. Tympanic throughout. No presence of ascites from negative fluid wave. No hepatosplenomegaly to palpation. No CVA tenderness.

Good exam

Genitourinary	Bladder is not distended and non-tender to palpation. OB status – post menopausal.
MSK	Symmetric muscle bulk with appropriate tone for her age. No soft tissue swelling, erythema, ecchymosis, atrophy, or deformities in bilateral lower and upper extremities. Full active/passive ROM of all extremities without rigidity or spasticity.
Neuro	No focal deficit present. Cranial + Peripheral – Not performed.
Mental Status	Alert and oriented to person, place, time, and situation. Intact language and speech. No depression or suicidal ideations. Behavior normal.

Recent Labs

CBC

- WBC 12.81 (H) 07/15/2022
- HGB 11.7 (L) 07/15/2022
- HCT 34.0 (L) 07/15/2022
- MCV 85.6 07/15/2022

BMP

- Sodium 129 (L) 07/15/2022
- Potassium 4.1 07/15/2022
- Chloride 88 (L) 07/15/2022
- CO2 24.0 07/15/2022
- Glucose 98 07/15/2022
- BUN 24 (H) 07/15/2022
- Creatine 0.90 07/15/2022
- Magnesium 2.40 07/15/2022
- Calcium 9.3 07/15/2022

CMP

- ALT 8 07/15/2022
- AST 11 07/15/2022
- ALK PHOS 81 07/15/2022
- Albumin 3.6 07/15/2022
- Protein 3.6 07/15/2022

BLOOD GAS

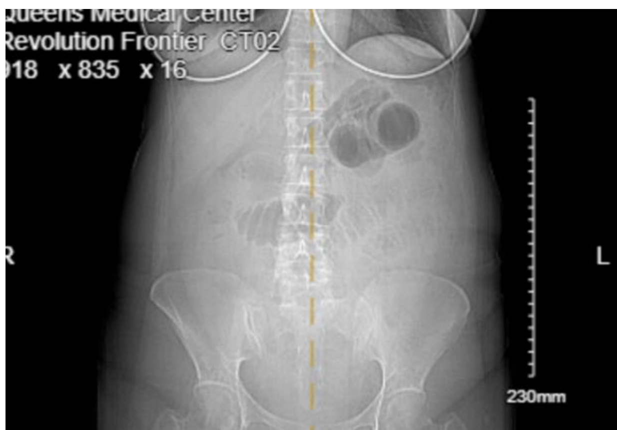
- pH 7.39 07/15/2022
- LACTATE 1.6 (H) 07/15/2022

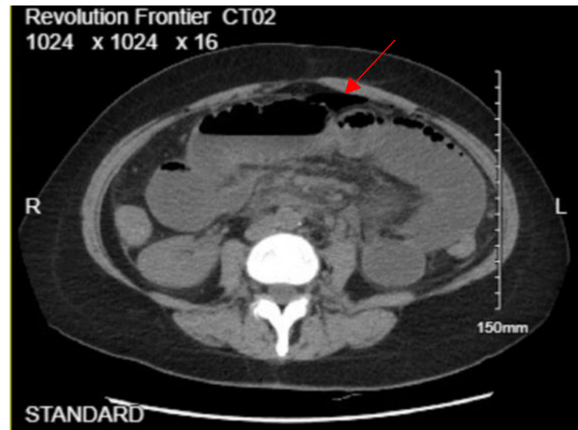
Recent Imaging

CT Abdomen Pelvis without Contrast 07/15/2022

IMPRESSION:

- Free intraperitoneal air.
- Abnormally dilated loops of small bowel. Transition point not clearly identified.
- Colonic diverticulosis.
- Small amount of pelvic fluid.
- No intraabdominal abscess or notable masses.





Assessment/Plan

I.V. is a 56-year-old female with no significant PMHx or PSHx presents to the ED for abdominal pain x 4 days accompanied with nausea, episodes of bilious vomiting, and diarrhea. Upon ED assessment patient appears uncomfortable lying on the stretcher. Vital signs unremarkable. Physical exam is notable for abdominal distention, rebounding, tenderness to palpation diffusely over the abdomen with tenderness worse in LLQ. Labs remarkable for WBC of 12. CT Abd/Pelvis reveals free intraperitoneal air and dilated loops of small bowel. Free air is likely secondary to an SBO with unknown etiology. Admit to surgery service for treatment of obstruction and the determination for the etiology of free intraperitoneal air / SBO via exploratory laparotomy. The differential diagnosis for free air and SBO include perforated peptic ulcer vs. perforated diverticulitis vs. paralytic ileus vs. incarcerated hernias vs. malignancy.

Differential Diagnoses

1. Perforated peptic ulcer (**most likely**)
    - **Likely** because Pt admits to crampy abdominal pain with bilious vomiting and diarrhea. Denies prior SHx.
    - PE positive for abdominal distention, rebounding, diffuse tenderness to palpation
    - Labs positive for leukocytosis. CT remarkable for diverticulosis in the sigmoid colon and free intraperitoneal air
    - Unlikely due to lack of GERD symptomatology
2. Perforated diverticulitis
    - Pt admits to crampy abdominal pain with bilious vomiting and diarrhea. Denies PSHx.
    - PE positive for abdominal distention, rebounding, diffuse tenderness to palpation with increased tenderness in LLQ

- Labs positive for leukocytosis. CT remarkable for diverticulosis in the sigmoid colon and free intraperitoneal air
- **Unlikely** because patient is afebrile and CT does not reveal fluid collection in abdomen or obvious perforation in diverticula

3. Paralytic ileus
   - Pt admits to crampy abdominal pain with bilious vomiting and diarrhea
   - CT reveals dilated loops of bowel with no transition
   - **Unlikely** because PE reveals normoactive bowel sounds and CT imaging is only remarkable for small bowel dilatation, not large bowel
4. Incarcerated hernias
   - Pt admits to crampy abdominal pain with bilious vomiting and diarrhea
   - **Unlikely** because physical exam and CT unremarkable for bulges or herniations or protrusions or fascial defects in abdomen
5. Malignancy (**least likely**)
   - Pt admits to crampy abdominal pain with bilious vomiting and diarrhea
   - **Unlikely** because pt pain is in an acute setting, denies unintentional weight loss, CT imaging shows no signs of possible tumors

 # Free Intra-Peritoneal Air 2/2 SBO of unknown etiology

- New admit to surgery service
- CT Abdomen/Pelvis showed remarkable for diverticulosis in the sigmoid colon and free intraperitoneal air
- WBC 12

PLAN:

- To OR <u>urgently</u> for Exploratory Laparotomy, with repair of perforated viscus / possible bowel resection / possible stoma creation
- NPO
- Order pre-op labs
- NG tube placement for bowel will be done intra-operatively
- CONTINUE IVF with NaCl 0.9% 1000mL IV
- START broad spectrum abx Ciprofloxacin 400mg IV and Metronidazole 500mg IV

<u>OP Note</u>

Procedure: Exploratory Laparotomy with Hartmann's Procedure (Sigmoid Colectomy and Colostomy creation)

Preoperative Dx: Free Intra-Peritoneal Air 2/2 SBO of unknown etiology

Postoperative Dx: Perforated Diverticulitis (Hinchey Classification III)

Description: Exploration of abdominal cavity revealed copious amounts of purulent-foul smelling fluid. No adhesions present which is consistent with absent PSHx. There were multiple dilated small bowel loops, with an area adherent to a markedly inflamed sigmoid colon. A perforated diverticulum with gross inflammation was seen at the mid-sigmoid colon. Hartmann's procedure performed to resect perforated and inflamed area of distal sigmoid. Pelvis was irrigated multiple times to clear turbid fluid and to identify any sites of bleeding. Colostomy was created with proximal sigmoid colon.

Great plan and thanks for including the operative note and images!
With red flag symptoms and signs on HPI and exam, consider obtaining a CXR +/- abdominal flat plate with similar cases to r/o pneumoperitoneum, which if found would allow for expediting care to the OR.