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Chief complain: “I have been nauseous and vomiting the past 3 days”

HPI
An 82-year-old female with a past medical history of atrial fibrillation on Eliquis, hypothyroidism, essential hypertension, chronic kidney disease stage 3–4, and type 2 diabetes mellitus presents for evaluation of nausea and vomiting for 3 days alongside urinary symptoms and dysuria. She was recently admitted to an outside facility for similar complaints of a urinary tract infection (UTI) and left hydronephrosis, as well as a known pelvic organ prolapse of the bladder. The patient reports subjective tactile temperatures at home, but nothing was objectively measured. On evaluation today, the patient’s upper gastrointestinal symptoms have completely resolved. Her last episode of emesis occurred early this morning, and she has since tolerated her breakfast tray well without recurrence of nausea or vomiting.

She also complains of localized perineal skin irritation and burning, which she attributes to her diapers ("pampers"). She denies cough, congestion, chest pain, shortness of breath, or leg swelling. She is noted to be a poor historian due to advanced age.

PMHx:
- Chronic Atrial Fibrillation: Baseline rate-controlled, anticoagulated.
- Chronic Kidney Disease (CKD): Stage 3–4 baseline (Creatinine range ~1.6–2.0 mg/dL).
- Type 2 Diabetes Mellitus: Managed with oral agents and basal insulin.
- Essential Hypertension: Long-standing history.
- Hypothyroidism
- Pelvic Organ Prolapse: Bladder cystocele and uterine prolapse

PSHx:
- No significant surgical history reported

Colonoscopy: Greater than 10 years ago, reportedly normal
Meds:
- Apixaban (Eliquis) 2.5 mg PO BID (A-fib stroke prophylaxis)
- Losartan 25 mg PO daily (Antihypertensive / Renal protection)
- Metoprolol tartrate 25 mg PO daily (A-fib rate control)
- Bumetanide 1 mg oral tablet (0.5 tab / 0.5 mg) PO daily (Loop diuretic)
- Jardiance (Empagliflozin) 10 mg PO daily (Glycemic control / Heart failure protection)
- Tradjenta (Linagliptin) 5 mg PO daily (Glycemic control)
- Lantus Solostar Pen 100 units/mL (4 units) SQ daily (Basal insulin)
- Levothyroxine 112 mcg PO daily (Thyroid replacement)
- Pantoprazole 40 mg PO daily AC (GI protectant)
- Rosuvastatin 40 mg PO daily HS (Dyslipidemia)
- Ferrous sulfate 325 mg PO daily (Anemia)
- Multiple Vitamins 1 tab PO daily

Fam Hx: Primary relatives notable for essential hypertension.

SocHx:

- Smoke: Never smoked
- Drugs: Denies recreational drug use
- Alcohol: Drinks socially
- Functional Status: independent in ADLs
- Living situation: Lives with family and caregivers (not left alone)

Allergies: No Known Allergies
Code status: Default Full Code

Review of Systems (ROS)

- Constitutional: Admits to nausea, weakness and tactile fevers at home. Denies chills, fatigue, or weight change.
- Head:
- Eyes: Denies blurry vision, double vision, eye pain, or redness.
- Ears/Nose/Throat (ENT): Denies hearing loss, tinnitus, vertigo, epistaxis, sinus congestion, or sore throat.
- Neck:
- Cardiovascular: Denies chest pain, palpitations, or leg swelling.
- Respiratory: Denies shortness of breath, cough, or wheezing.
- Gastrointestinal: Admits to nausea and vomiting over the past 3 days but seems to have resolved this morning. Denies difficulty swallowing, heartburn, rectal bleeding, or diarrhea.
- Genitourinary: Admits to dysuria, increased urinary frequency and incontinence. Denies hematuria
- Musculoskeletal: Admits to generalized weakness since the start of illness. Denies joint pain, back pain, or muscle aches.
- Skin: Admits to localized perineal skin irritation, itching and burning. Denies generalized rashes, hives, abnormal bruising, or jaundice
- Neurological: Denies headache, dizziness, syncope, numbness or transient paresthesia.
- Psychiatric: Denies anxiety, depression, or suicidal/homicidal ideation.
- Endocrine: Denies heat/cold intolerance, excessive thirst, or excessive hunger.
- Hematologic/Lymphatic: Denies easy bruising, bleeding, or lymphadenopathy.
- Allergic/Immunologic: Denies history of anaphylaxis or recurrent infections.

Objective

Vitals:
Temperature: 36.8°C (98.3°F) [Max: 36.8°C]
Heart Rate: 78 bpm (Stable range: 78–91 bpm)
Blood Pressure: Severe hypertension noted. Current: 192/88 mmHg (Range: 185/86 – 197/80 mmHg)
Respiratory Rate: 16 breaths/min (Range: 16–18 breaths/min)
Oxygen Saturation (SpO2): 98% on room air
BMI

Physical Exam:
General: Alert, cooperative, appears stated age, mild discomfort secondary to abdominal pain.
Skin: Warm, and dry. No cyanosis, rash or echymosis.
HEENT: Normocephalic, atraumatic. Pupils equal, round, and reactive to light and accommodation. No Scleral icterus or conjunctival pallor. Airway is patent without pharynx erythema. Mucous membranes are moist. Neck is nontender and not stiff.
Pulmonary: Lungs clear to auscultation bilaterally. No wheezes, rales, or rhonchi.
Cardiac: Irregularly irregular S1, S2. No murmurs, rubs, or gallops. Pulses palpable (2+) in all four extremities.
Peripheral Vascular: Distal pulses 2+ and symmetric in all extremities. Capillary refill <2 seconds. No peripheral edema. Extremities warm and well perfused.
Abdomen: Soft, non-distended. Non tender to palpation. Normal bowel sounds present. Tenderness to palpation across all 4 quadrants. No rebound tenderness or guarding noted. No costovertebral angle tenderness present.
Extremities: Mild lower extremity edema bilaterally. Full range of motion intact in all extremities with equal pulse in upper and lower extremities. No deformity or tenderness in all 4 extremities
Neuro and Psych: Awake, alert, oriented to person. Cooperative, interactive, and moves all 4 extremities symmetrically against gravity. Cranial nerves II–XII grossly intact. Strength 5/5 in bilateral upper extremities and proximal lower extremities. GCS= 15

Blood work
Laboratory & Diagnostic Data
Basic Metabolic Panel (BMP) Progression Trend

Analyte	25-May @ 14:40	26-May @ 07:07
Sodium (mEq/L)	134 [L]	130 [L]
Potassium (mEq/L)	4.8	5.4 [H]
Chloride (mEq/L)	100	101
Carbon Dioxide / Bicarbonate (mEq/L)	16 [L]	15 [L]
Anion Gap (mEq/L)	18 [H]	14
Blood Urea Nitrogen (mg/dL)	70 [H]	62 [H]

Creatinine (mg/dL)	3.08 [H]	2.63 [H]
eGFR (mL/min/1.73m^2)	15 [L]	18 [L]
Glucose (mg/dL)	161 [H]	220 [H]
Calcium (mg/dL)	9.3	9.0

Hematology & Other Labs

- WBC: 10.2 x 10^3/µL | Hgb: 9.24 g/dL | Hct: 33.4% | Platelets: 470 x 10^3/µL [H] (Reactive thrombocytosis)
- Differential: Auto Neutrophil %: 77.2% [H] | Lymphocyte %: 13.9% | Monocyte %: 7.6%
- Hepatic Panel: Total Protein: 9.2 [H] | Albumin: 3.8 | TBili: 0.2 | AST: 12 | ALT: 6 [L] | AlkPhos: 104
- Lactate Trend: 0.7 mmol/L (Normal/Stable)
- TSH: 1.99 mIU/L (Euthyroid)

Urinalysis Basic (25-May-2026 @ 14:40)

- Color/Appearance: Light Yellow / Turbid
- Chemical: Glucose 161 mg/dL, Protein 300 mg/dL, Blood Moderate, Nitrite Negative, Leukocyte Esterase Large
- Microscopic: WBC: >998 (Severe pyuria), RBC 43, Bacteria Few, Squamous Epithelial Cells 2 (Clean catch)

Imaging & Advanced Studies

CT Abdomen and Pelvis Without Contrast (25-May-2026 @ 17:20)

- Genitourinary Tract: Demonstrates moderate left hydroureteronephrosis, which is stable compared to historical imaging. No obstructing radiopaque ureteral calculus is identified. There is prominent thickening of the urothelium of the left renal pelvis and left ureter, accompanied by surrounding soft-tissue fat stranding.
- Bladder: Diffuse bladder wall thickening is noted.
- Gastrointestinal Tract: Incidental finding of notable esophageal wall thickening at the level of the gastroesophageal junction.

Assessment

82 y/o F, ~~poor historian due to advanced age,~~ with pmhx of chronic atrial fibrillation on Eliquis, hypothyroidism, essential hypertension, CKD stage 3–4, and type 2 diabetes mellitus presents with a 3-day history of nausea, vomiting, dysuria, and urinary frequency. Presentation is secondary to acute left pyelitis and ureteritis from an ascending complicated upper UTI, likely promoted by urinary stasis from baseline pelvic organ prolapse. Course is complicated by severe acute kidney injury (AKI) on CKD, severe uncontrolled hypertension (BP ranging up to 197/80 mmHg), worsening hyponatremia (130

mEq/L), an acute potassium uptrend (5.4 mEq/L), and an incidental finding of distal esophageal thickening.
Upper GI symptoms have completely resolved today with improving prerenal uremic clearance (BUN/Cr trending down). New clinical findings include incontinence-associated perineal dermatitis and an exceptionally high inpatient fall risk due to requested unassisted ambulation despite severe uncontrolled hypertension and metabolic/salt derangements.

Differential Diagnosis

1. Acute Left Pyelitis and Ureteritis secondary to Ascending Urinary Tract Infection (UTI)
    a. CT imaging confirms left-sided upper urinary tract inflammation with renal pelvis/ureteral thickening and surrounding fat stranding, correlating with severe pyuria (WBC >998/HPF) and large leukocyte esterase on urinalysis. Her type 2 diabetes promotes bacterial growth through glucosuria, while uterine and bladder prolapse contribute to urinary stasis and ascending infection. This infection can trigger the renal-gastric reflex via vagal pathways, leading to nausea and vomiting.
2. Acute Obstructive Uropathy on Baseline Chronic Hydronephrosis (Malignant vs. Structural Stricture)
    a. The patient has chronic left hydronephrosis, and current CT findings cannot exclude a urothelial neoplasm or benign stricture at the left ureterovesical junction (UVJ). While no radiopaque stone was identified, worsening pelvic organ prolapse or a partial UVJ obstruction from a possible urothelial carcinoma could promote urinary stasis and recurrent UTIs. Increased intrarenal pressure from obstruction may stretch the renal capsule and contribute to nausea and vomiting.
3. Esophageal Thickening Differential: Severe Peptic Esophagitis / Gastroesophageal Reflux Disease (GERD) with Occult Hiatal Hernia vs. Infiltrative Esophageal Neoplasm
    a. Non-contrast CT abdomen/pelvis incidentally showed esophageal wall thickening at the gastroesophageal (GE) junction. Her home use of pantoprazole suggests a history of chronic acid reflux, potentially related to a hiatal hernia, which can cause mucosal edema and wall thickening. Given her age (82), malignancy such as esophageal adenocarcinoma or squamous cell carcinoma must also be considered. Additionally, 3 days of forceful vomiting may have caused acute mucosal injury and reactive edema. Severe distal esophageal inflammation or a large hiatal hernia can impair LES function, contributing to persistent nausea and regurgitation.
4. Hypovolemic Hyponatremia (Vomiting-Induced) vs. Euvolemic SIADH secondary to Pyelonephritis
    a. Her sodium fell from 134 to 130 mEq/L despite improving renal function (creatinine 3.08 → 2.63), suggesting her volume status is recovering and making persistent hypovolemic hyponatremia less likely. This raises concern for SIADH, as severe infections such as acute pyelonephritis can trigger non-osmotic ADH release, leading to free-water retention and dilutional hyponatremia. The resulting cerebral edema and stimulation of the medullary vomiting centers may contribute to her persistent nausea and vomiting.
5. Hyperkalemia-Induced Conduction Disturbance vs. Asymptomatic Renal Retention
    a. Her potassium increased from 4.8 to 5.4 mEq/L in the setting of AKI on CKD (GFR 15–18), impairing renal potassium excretion. Concurrent metabolic acidosis further raises

serum potassium by shifting potassium out of cells. Given her history of atrial fibrillation, hyperkalemia must be monitored closely for cardiotoxic effects on myocardial conduction and potential arrhythmias. Additionally, uremia (BUN 70) and acid-base disturbances may contribute to nausea and vomiting through stimulation of the chemoreceptor trigger zone (CTZ).

Plan

1. **Acute Left Pyelitis / Ureteritis / Complicated Upper UTI**
    a. Maintain current empiric intravenous antibiotic therapy. Await final organism identification and sensitivities from the 25-May urine culture to narrow coverage.
    b. Follow along with the Infectious Disease team for antimicrobial tailoring.
    c. Urology team consult is complete and they find the left hydroureteronephrosis is stable without an obstructing calculus. No acute surgical intervention or drainage is indicated at this time. Monitor closely for secondary systemic signs of sepsis (hypotension, rising lactate, or refractory fevers).
2. **Acute Kidney Injury (AKI) on CKD & Cardiovascular Management**
    a. Hold home Bumex (bumetanide) immediately due to active AKI and dynamic volume shifts. Hold home Losartan to optimize intrarenal hemodynamics during this acute recovery phase. Hold home Jardiance (empagliflozin) during the acute hospitalization; plan to resume at discharge due to its long-term cardioprotective and renal benefits in the setting of heart failure and CKD
    b. Continue therapeutic Eliquis (apixaban) 2.5 mg PO BID for stroke prophylaxis and home Lopressor (metoprolol tartrate) 25 mg PO daily for atrial fibrillation rate control.
    c. Trend Basic Metabolic Panel (BMP) daily to track the creatinine recovery curve (currently improving from 3.08 to 2.63 mg/dL).
3. **Electrolyte & Metabolic Management (Potassium Uptrend & Hyponatremia)**
    a. Order an immediate inpatient 12-lead EKG to evaluate for hyperkalemic cardiotoxicity and conduction changes (peaked T waves, PR prolongation, or QRS widening). Initiate a strict low-potassium renal diet. Follow daily morning BMP trends closely.
    b. Address hyponatremia (current 130 mEq/L) without over-hydrating a potential infection-induced SIADH state; avoid all hypotonic maintenance intravenous fluids. Maintain careful, strict fluid balance charting (intake/output tracking)
    c. Manage hyperglycemia (current glucose 220 mg/dL) by placing the patient on an inpatient ADA diet and initiating standard sliding-scale short-acting insulin coverage based on pre-meal (AC) and bedtime (HS) fingersticks.
4. **Distal Esophageal Thickening (Incidental Finding on CT)**
    a. Continue inpatient Pantoprazole 40 mg PO daily AC.
    b. Gastroenterology team consult is complete and recommendations are as follow: the mural thickening is highly suspicious for severe peptic esophagitis versus acute post-emetic Mallory-Weiss type wall edema following 3 days of forceful vomiting, likely associated with an underlying structural hiatal hernia.
    c. Defer invasive diagnostics or urgent endoscopies during the acute recovery window, as emesis has completely resolved today and hemoglobin remains stable (9.24 g/dL).

Coordinate outpatient, elective Esophagogastroduodenoscopy (EGD) timing at discharge to definitively rule out lower esophageal malignancy given advanced age.

5. **Perineal Dermatitis**
    - **a.** barrier ointment protocol (Zinc Oxide or Calmoseptine cream) applied with every brief change. Ensure the perineal and groin skin is kept meticulously clean and dry to treat Incontinence-Associated Dermatitis (IAD).
    - b. Monitor closely for the development of satellite lesions; add topical Nystatin or Clotrimazole if an opportunistic fungal intertrigo pattern emerges.
6. **Mobility Status, Safety, and Fall Prevention**
    - **a.** Maintain strict Fall Precautions; independent ambulation to the bathroom is denied due to frailty and patients advanced age.
    - b. Modify patient status to "assistance only"; she may ambulate or transfer only with the direct physical support of nursing staff or physical therapy.
    - c. Ensure bed alarms are continuously active to prevent unassisted ambulation.