



36-year-old woman with concern
for adrenal insufficiency

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Endorama

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History of Present Illness

- 36-year-old woman with history of idiopathic gastroparesis who presented with dehydration, malnutrition.
 - Endocrine consulted later for concern of adrenal insufficiency.

Past Medical History

- Idiopathic gastroparesis:
 - In April 2009, she developed stabbing epigastric pain, nausea, vomiting, and weight loss.
 - In May 2010, gastric emptying study showed significant delay.
 - Failed trial of metoclopramide and erythromycin.
 - In July 2010, J-tube and venting G-tube was placed at UIC.
 - In Sept 2010, gastric pacemaker was placed.
 - In Aug 2011, TPN was added.
 - In Dec 2011, TPN was discontinued as Medicaid would not cover both TPN and J-tube feedings.
 - Weight had decreased from 109 lbs to 102 lbs in 2 weeks.
 - Saw her gastroenterologist at clinic, found to have BP of 76/33 and was given 3L NS.

Past Medical History cont.

■ Past Surgical History

- Cholecystectomy
- Jejunostomy tube placement
- Gastric pacemaker placement
- Hysterectomy for heavy and irregular menses

■ Allergies:

- Opioids
- IV dye

■ Medications:

- Zofran 8 mg IV prn
- Compazine 10 mg q8 hr prn
- Tramadol 50 mg q6 prn
- Calcium 500 mg + Vitamin D 200 IU BID
- Esomeprazole 40 mg daily
- Sennosides-docusate

Past Medical History cont.

■ Social History:

- Married with 3 children.
- Stay-at-home mom.
- No history of tobacco, etoh, or recreational drug use.

■ Family History:

- Paternal grandparents and father with DM2.
- Paternal grandmother with colon cancer.
- No family history of pituitary, thyroid problems.
- No family history of GI issues.

■ ROS:

- Energy level had improved on TPN.
- Chronic low back pain.
- Chronic constipation, looser stools in the hospital.
- No galactorrhea, vision problems, headaches.

Physical Exam

- Ht 171.5 cm (5' 7.5"), Wt 48 kg (105 lb 13.1 oz), BMI 16.33 kg/m²
- Temp 97.2, BP 103/61 (90s-110s/50s-70s), Pulse 63, Resp 20, SpO₂ 99% on room air
- Orthostatics: supine 100/62, 68→sitting 117/70, 76→standing 99/75, 96
- Constitutional: Patient appears malnourished, in no acute distress.
- Eyes: Conjunctivae are not injected. Sclerae anicteric. Pupils are equal, round, and reactive to light. Extraocular movements are intact.
- ENT: Mucous membranes moist. No hyperpigmentation in buccal mucosa.
- Neck: Supple. No thyromegaly or nodules palpated.
- Cardiovascular: Regular rhythm and rate. No murmurs appreciated. Intact distal pulses.
- Respiratory/Chest: Normal respiratory effort. No wheezes or crackles.
- Gastrointestinal/Abdomen: G-tube and J tube c/d/i. Normoactive bowel sounds. Soft, mildly diffusely tender, nondistended.
- Musculoskeletal/extremities: No peripheral edema.
- Neurological: Alert and oriented to person, place, and date. Normal deep tendon reflexes.
- Skin: Skin is warm and dry. No acanthosis nigrans noted.
- Psychiatric: Normal mood and affect.

[Laboratory Data]

141 108 9
3.6 15 0.6

49 (70-138)

Ca 8.5, Phos 2.4, Mg 1.7

~~10.2~~
3.8 ~~240~~
~~30.1~~

Total protein 6.5 (6-8.3), albumin 3.8, pre-albumin 6 mg/dL (21-41)

Total bili 0.8, alk phos 51, AST 18, ALT 14, lipase 22
β-hydroxybutyrate 4.49 mmol/L, lactic acid 0.6 mEq/L

U/A: pale yellow, clear, SG 1.023, pH 6.0, 2+ glucose,
3+ ketones

Laboratory Data cont.

- 6AM cortisol: 2.4 mcg/dL
 - Albumin 3.8 g/dL
- Cort stim, 2PM:
 - 4.6 (ACTH 7.4 pg/mL) → 20.5 → 27.1

Assessment & Plan

- Adrenal function:
 - Passed cort stim, suggesting against primary adrenal insufficiency (or long-standing secondary adrenal insufficiency).
 - AM cortisol still very low with concern for secondary adrenal insufficiency.
 - Recommend to recheck AM cortisol with ACTH.
- Hypoglycemia: No further episodes but now on TPN. Malnutrition v. adrenal insufficiency.
- Hypotension:
 - Resolved with IVFs as outpatient. Blood pressures stable as inpatient, though orthostatic.
 - More consistent with dehydration as secondary adrenal insufficiency should not cause orthostasis.
 - May also have component of autonomic neuropathy given gastroparesis.

[More labs]

- 7AM:
 - ACTH <5.0
 - Cortisol 7.7
- 4:40AM:
 - ACTH 15
 - Cortisol 6.2
- Prolactin: 30.20 ng/mL
- TSH: 0.45
- fT4: 1.23 (0.9-1.7)
- FTI: 9.4
- T4: 8.9 (5-11.6)
- T3: 134 (80-195)

[Plan]

- HPA axis:
 - Start hydrocortisone 15 mg qAM and 5 mg qPM.
 - Outpatient follow up for insulin tolerance test.
- Orthostasis:
 - Trial of fludrocortisone for symptomatic treatment.
- Idiopathic gastroparesis:
 - Small bowel follow through showed small bowel dysmotility.
 - TPN was restarted and tube feedings discontinued.

Insulin Tolerance Test

Time (min)	0 (8AM)	15	30	45	60	75	90	105	120	135
Serum Glucose (mg/dL)	85	88	68	22	49	55	71	84	89	89
Cortisol (mcg/dL)	9.8	9.0	7.5	6.6	14.1	16.7	18.5	14	8.5	6.7