

Clinical Problem Solving

Discussant - Gustavo Heudebert

Presenting - Robert M. Centor

Today's speaker has no conflict of interest to disclose.

The University of Alabama School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

UAB School of Medicine designates this educational activity for a maximum of 1 AMA PRA Category 1 Credit (s) Physicians should only claim credit commensurate with the extent of their participation in the activity.

Patient #1

- 59-year-old male presents to emergency department with chest pain
- Apparent communication problems for 3 months
- Chest pain – substernal, severe, throbbing, most severe for 1 hr
- Denies dyspnea, nausea, diaphoresis
- Radiates to left leg

ED evaluation

- PMH
 - Hypertension, possible cerebrovascular disease
- Physical exam
 - Afebrile, P 72 & reg, R 18, BP 98/58, O₂ sat 97%
 - Lungs clear
 - Heart – RRR
 - Abd – non-tender

Testing

- EKG - rate 57, T-wave inversions V_3 - V_6
- BMP - Na 141, K 3.5, creat 1.7, BUN 16
- Normal liver tests
- Initial troponin 0.154
- WBC 12.8; H/H 14.8/44

Imaging

- Head CT read as normal
- CXR - moderate cardiomegaly and tortuous aorta

ED course

- Repeat EKG – resolution of T-wave inversions
- Repeat troponin - 0.643
- Cardiology consult – admit to hospitalist service
- Emergency physician starts therapeutic enoxaparin and admits

Hospitalist evaluation

- Troponin 1.76
- BP 180/60
- Cardiac exam – grade ii/vi diastolic blowing murmur and grad iii/vi systolic murmur
- JVD 6 cm but no peripheral edema

Final clues

- Nurse calls moonlighter and states different BP in right and left arm
- BP in ED measured in right arm, first measured in left arm on floor
- Hospitalist moonlighter confirmed
 - 180/60 in left arm
 - 120/40 in right arm

Chest CTA

- Extensive aortic dissection (I/Stanford type A)
- Extends from aortic valve to abdominal aorta
- Involves the innominate artery, left carotid, left subclavian, renal and mesenteric arteries
- Also extends into left coronary artery
- Renal infarct suggested

Discussion

Patient #2

- 53 yr old female, h/o alcohol abuse, now with hematemesis for 1 day.
- Admits to similar episode one month ago.
- Also c/o epigastric pain, N & V after eating food for a few months.
- She drinks one pint of liquor/day and takes about 4 BC powders /day.

Patient #2

- PMH- Seizure disorder, GERD, Alcohol abuse and withdrawals.
- ROS- positive for:
 - decreased appetite
 - 15 lb weight loss (6 weeks),
 - fatigue, weakness, and
 - a seizure 5 days ago.

Physical Exam

- Vitals- 98.8 / 83 / 16/ 125/70, O2 sat- 96% on RA.
- Patient was A/OX3 and in no acute distress.
- Abdomen - soft , non distended, with moderate epigastric tenderness. No rebound or guarding.
- Rectal exam- hemoccult positive.
- Some scratch marks over the trunk and extremities.
- Otherwise - normal.

Lab data

- CBC
 - WBC- 9.8
 - Hb- 10.2 / Hct- 31.8
 - Plat- 388

- BMP

143	102	9	90
3.3	23	0.6	9.6

Liver tests

Factory	Destruction	Obstruction
Alb 3.7	AST 125	Alk Phos 1271
INR 0.9	ALT 64	T Bili 1.3

- Lipase- 36
- ETOH level- 260, UDS- Neg

Further testing

- EKG - Showed non specific ST- T changes
- CXR- R shoulder prosthesis, diffuse osteopenia
- Abd US- **Mildly distended GB, CBD dilated (9mm)**
- Abd CT – Thickening of the colon wall with **normal liver and GB.**

Hospital Day #2

- Pt gives h/o 2-3 years of severe itching
- Iron 281, Ferritin 164, TIBC 325, Iron Sat 86%
- Alk Phos 1050, GGT 1509

Final data

- Empiric Ursodiol resolved itching
- MRCP- No stones, CBD and intrahepatic biliary tree w/o stricture or dilatation.
- AMA- 1.6 (normal is <0.1)
- Hemochromatosis gene- Not detected
- Discharge ALP- 1008

Discussion

Patient #3

- 64 yo woman in for routine visit
- 188/105 – previously well controlled
- Known paranoid schizophrenia, hypertension
- Hyperlipidemia, unexplained hypokalemia

Meds

- Oral potassium - 10 mEq daily
- Olanzapine

Labs

142	90	8
1.9	43	0.6

○ Magnesium 2.4

Previous records

- Hypokalemia - 2.1 and 3.3
- Denied:
 - Prescription diuretics
 - Laxative abuse
 - Fasting
 - Diarrhea
 - Vomiting

Urine labs

- Urine Na = 73
- Urine K = 21
- Urine osm = 226
- TTKG = 13.3
 - Inappropriately high

RAS system

- Morning aldosterone - < 2 ng/dl (low)
- Morning renin - < 14.2 pmol/L per h (low)

Discussion

- Differential
 - Liddle - presents at an earlier age
 - Excess glycyrrhizin (e.g., licorice, red man tobacco)
- History reveals:
 - Herbal supplement that includes licorice oil