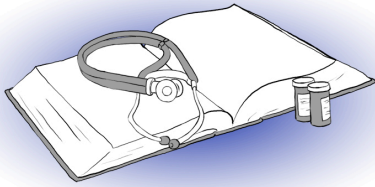


2011



STUDENT NATIONAL PHARMACEUTICAL ASSOCIATION

CLINICAL SKILLS COMPETITION

Practice Case #2

FB is a 56 year old Hispanic male who presents to the ER with his wife. He has a one day history of vomiting up “coffee grounds” and feeling progressively more lightheaded. He also has a two day history of black, tarry stools. He was diagnosed several years ago with alcoholic cirrhosis. The doctor told him he needed to stop drinking but he “just couldn’t give it up.” He denies shortness of breath or chest pain. Patient repeatedly states that he does not want to be here and does not trust doctors.

PMH

Alcoholic cirrhosis
Ascites

Diabetes mellitus
Concurrent *tinea pedis*

Social History

Manager at a gas station; married with one daughter and one son; drinks 1-2 six packs per night for the past 20+ years; smokes 1 ppd since he was 16; denies illicit drug use

Medications on Arrival

Metformin 500mg 1 tab in the morning and 1 tab in the evening, patient is non-compliant with regimen

Allergies: NKDA

General

Appearance: WDNW male that appears stated age, anxious, jaundice

Vital Signs: BP 112/76, P 88, RR 20, T 37°C, 100kg

HEENT: Scleral icteris

Lungs/Thorax: CTA, no gynecomastia

CV: RRR

Abdomen: no caput medusae, some angiomas with telangiectasias, +fluid wave, +tense ascites

Extremities: 2+ edema, jaundice

Neuro: + asterixis

ABG: Room air: pH 7.4, pCO₂ 40mmHg, pO₂ 90mmHg, O₂ sat 98%

Chest X-Ray : No abnormal findings

ECG : NSR, no Q waves, no changes in ST

Labs

Na	139 mEq/L	PT	14 sec
K	4.7 mEq/L	INR	1.8
Cl	102 mEq/L	AST	84 IU/L
CO ₂	24 mEq/L	ALT	55 IU/L
BUN	24 mg/dl	Alk phos	82 IU/L
SCr	0.8 mg/dl	LDH	268 IU/L
Glu	196 mg/dl	T. bili	3.4 mg/dl
Hgb	7 g/dl	Protein	6.8g/dl
Hct	21%	Alb	2.1 g/dl
WBC	6.4 x 10 ³ /mm ³	Ca	8.9 mg/dl
Plt	100	Phos	3.5 mg/dl
aPTT	25.3 sec	A1c	9.7%

Case Key

Assessment/Plan:

1) Variceal Bleed

Start octreotide 50mcg IV bolus then 25-50mcg/hr (somatostatin analog) drip for 3-5 days

Start non-cardioselective beta-blocker (propranolol 20mg one tablet twice daily or nadolol 40mg one tablet daily) when patient is hemodynamically stable

Start prophylactic antibiotic treatment (one of the following)

Ceftriaxone IV 1gram/day

Ciprofloxacin IV 400mg BID

Norfloxacin PO 400mg BID

Start IV fluid support

Give blood transfusion

Do not try to correct any coagulation or platelet deficit

Perform EGD (esophagogastroduodenoscopy) within first 12 hours of admission

Perform variceal band ligation or sclerotherapy

2) Alcoholic Cirrhosis

Talk to patient about his alcohol use

Look for alcohol abuse (CAGE, AUDIT)

Get imaging of liver

Check for end-organ damage

Score patient: MELD, Maddrey Discriminant Function

Stop alcohol use

Consider naltrexone or acamprosate with counseling

Assess nutritional needs and treat as needed

3) Ascites

Avoid alcohol

Decrease sodium intake to less than 2000mg/day

PO spironolactone 100mg 1 tablet every day

Consider furosemide

Perform paracenteses when stable

No liver transplant because still actively drinking

Prevent spontaneous bacterial peritonitis with norfloxacin IV BID for 7 days or ceftriaxone IV every day for 7 days

Test ascitic fluid: cell count and differential, total protein, serum-ascitic albumin gradient

4) Diabetes mellitus

Discontinue metformin due to risk for lactic acidosis

Start glipizide 2.5mg 1 tab every day OR glimepiride 1mg every day with breakfast

Counsel patient to check blood sugar as directed

Follow up in three months

5) Concurrent *tinea pedis*

Recommend OTC antifungal product such as Lamisil AT (terbinafine), Tinactin (tolnaftate), Lotrimin AF (clotrimazole), etc.

Discharge

Counsel on disease states

Counsel on signs/symptoms that require immediate medical attention (GI bleed, hypoglycemia, etc)

Counsel on propranolol/nadolol

Refer to social worker for alcohol cessation

Follow up in 1-3 months for EGD

Counsel on sodium restriction

Counsel on spironolactone, furosemide

Counsel on frequent feedings, especially breakfast and a night-time snack for nitrogen balance

No liver transplant because still actively drinking, may reconsider in the future

Counsel to discontinue metformin

Counsel on glipizide/glimepiride

Counsel on lifestyle changes for diabetes

After recovery

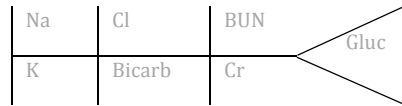
Titrate beta blocker to highest tolerated dose (no lower than 55 beats/minute, want 25% decrease in resting heart rate)

EVL every 1-2 weeks until varicies gone

Repeat EGD in 1-3 months

Manage ascites with PO diuretics

Physical Assessment



Lab	Value	Lab	Value	Vital Statistics	
TSH		INR		Ht	BP
LDL				Wt	HR
HgbA1c				IBW	Resp

Social History

Marital Status:

Occupation:

Smoking Status:

Alcohol Use:

Illicit Drug Use:

Psychosocial Information: (Compliance, level of education, literacy, financial issues)

Family History

Assessment of Disease & Medication Related Problems: *Create a prioritized problem list. Detail any drug-related or disease-related problems that will need to be addressed.*

Recommendations / Plan: *Address concerns from the prioritized problem list. Include recommendations for initiation or modifications to drug therapy and any monitoring parameters that will be necessary. Include all medications even if no changes are recommended. Please document your recommendations below in a clear and legible manner.*

Patient Education: *Provide key education points for the patient.*



**Sponsor of the 2011 Student National Pharmaceutical Association
Clinical Skills Competition Program**

NORMAL VALUES GUIDE

CHEMISTRIES

Sodium	134-146 mEq/l
Potassium	3.5-5.1 mEq/l
Chloride	92-109 mEq/l
Bicarbonate	24-31 mEq/l
BUN	8-25 mg/dl
Creatinine	0.5-1.5 mg/dl
Glucose	60-110 mg/dl
Calcium	8.0-10.4 mg/dl
Ca ⁺² corrected =	
	$(\text{Alb}_{\text{nor}} - \text{Alb}_{\text{pat}}) 0.8 + \text{Ca}_{\text{pat}}$
Ca ⁺² , ionized	4.25-5.25 mg/dl
	45-50% of total Ca
Phosphorus	2.6-4.6 mg/dl
Uric Acid	2.4-7.5 mg/dl
Total Protein	5.6-8.4 g/dl
Albumin	3.4-5.4 g/dl
Total Bili	0.2-1.5 mg/dl
Direct Bili	0.0-0.3 mg/dl
Alk Phos	25-115 U/l
SGOT, AST	0-40 U/l
SGPT, ALT	0-40 U/l
LDH	50-240 U/l
CPK	5-200 U/l
CPK MB	< 3-5%
Cholesterol	< 200 mg/dl
LDL Chol	< 130 mg/dl
HDL Chol	> 40 mg/dl
Chol:HDL	< 4.5-6.0
Triglycerides	30-135 mg/dl
Amylase	60-180 U/l
Lipase	4-25 U/l
Magnesium	1.5-3.0 mg/dl
GGTP	10-50 U/l
PSA	< 4.0 ng/ml
Acid Phos, Tot	0-10 U/l
Acid Phos, Pr	< 4 U/l
Osmolality	274-296 mOsm/kg, 2(Na ⁺) + BUN/2.8 + Glu/18
Iron	50-160 mcg/dl
TIBC	240-425 mcg/dl
Iron % Sat	20-55%
Ferritin	30-250 ng/ml
Anion Gap	8-12 mEq/l
Vitamin B ₁₂	200-1000 pg/ml
Folate	5-12 ng/ml
Copper	90-200 mcg/dl
Ammonia	< 45 mcg/dl
Lactate	4-16 mg/dl
Zinc	50-150 mcg/dl
AFP	< 25 ng/ml
CEA	< 2.5 ng/ml
CEA, Smoker	< 5.0 ng/ml
CA - 15-3	< 20-30 U/ml
CA - 125	< 30 U/ml

HEMATOLOGY

Hemoglobin	M, 14-18 g/dl F, 12-16 g/dl
Hematocrit	M, 40-52% F, 37-47%
RBC	M, 4.8-6.0 x 10 ⁶ /mm ³ F, 4.1-5.5 x 10 ⁶ /mm ³

MCV	M, 80-95 fl F, 80-100 fl
MCH	27-32 pg
MCHC	32-36%
Hgb A _{1c}	3-6%
WBC	5000-10,000/ul
Segs	40-60%
Bands	0-5%
Lymph	20-40%
Mono	4-8%
Eos	1-3%
Baso	0-1%
Platelets	150-400 x 10 ³ /ul
Haptoglobin	100-250 mg/dl
ESR	M, < 10 mm/hr F, < 20 mm/hr
Retic Count	0.5-2.0%
PT	11-13 sec
aPTT	25-35 sec
Bleeding Time	< 5-6 min
Thrombin Time	10-14 sec
Fibrinogen	200-400 mg/dl
Fibrin Split Prod	Variable per dilution
Lymphocyte (diff)	
Total T, CD3	60-87%
Total T/mm ³	630-3170
B Cell	1-25%
Suppr, CD8	10-40%
Suppr/mm ³	240-1200
Helper, CD4	30-50%
Helper/mm ³	390-1770
H:S, CD4/CD8	0.8-3.0
b-2 microglobulin	≤ 2.0 mg/l
p24 antigen	
IgA	0.7-3.4 g/l

ABGs

PH	7.35-7.45
PaCO ₂	35-45 mmHg
PaO ₂	80-100 mmHg
HCO ₃	22-28 mEq/l
O ₂ Sat, art	95-98%
O ₂ Sat, ven	60-85%
BE	0 ±2 mmol/l

ENDOCRINOLOGY

T4 T	4.5-12.5 mcg/dl
T3 Uptake	22-36%
Free T4	0.8-1.5 ng/dl
T3	80-220 ng/dl
TSH	0.25-6.7
Aldosterone, supine	3-12 ng/dl
Aldosterone, upright	5-25 ng/dl
Calcitonin	< 75 pg/ml
Cortisol	6-24 mcg/dl, AM 2-10 mcg/dl, PM
Gastrin	0-200 pg/ml
Growth Hormone	1-10 ng/ml
Pepsinogen	25-100 mg/ml
Prolactin	M, 0-15 ng/ml F, 0-20 ng/ml
PTH	10-60 pg/ml

Last updated: 11/02

Guide to the SOAPe Note

S:

- History of present illness
- Past medical history
- Home medications
- Pertinent Social History
- Pertinent Family History
- Pertinent psychosocial issues (e.g. compliance, level of education, literacy)

O:

- Vital signs
- Pertinent lab values
- Arrange by organ system, working from head to toe
- Current medications (Dose, Route, Frequency)

A:

- Prioritized problem list
- Match the patient's current medications to the appropriate indication
- Detail any drug related problems
 - The patient needs a drug.
 - The patient is not receiving the optimal drug.
 - The drug dose is not optimal
 - The patient is experiencing an adverse drug reaction.
 - The patient is experiencing an unwanted drug interaction.
- Detail any disease related problems

P:

- Work off of prioritized problem list from assessment
- Suggest medication therapy changes and give the reasoning for your suggestion
- What is the evidence base or guideline which supports your plan?
- Suggest any lab work or monitoring parameters you would like to add.

E:

- Key education points for the patient
- Disease state knowledge
- Patient specific monitoring parameters
- Administration guidelines
- Adverse effects
- Lifestyle modifications/teaching
- Drug interactions
- Address any necessary psychosocial issues