



# *Therapeutics*

## *Past Papers*

## THERAPY OF CERTAIN DISORDERS DURING PREGNANCY

1) A pregnant woman is complaining of constipation and hemorrhoids. First line of treatment is?

Advise her to increase her fiber and fluid intake.

2) Which of the following is a reasonably safe first choice if dietary fibers fail to relieve constipation during pregnancy?

- A. Bisacodyl
- B. Castor oil
- C. Psyllium
- D. Senna
- E. Magnesium sulfate

Answer: C

\*\* 3) Which of the following laxatives should be avoided for treatment of constipation during pregnancy?

- a. Lactulose
- b. Psyllium
- c. Methylcellulose
- d. Dietary fiber
- e. Castor oil

Answer: E

\*\* 4) A 25-year-old overweight pregnant female in her second trimester complains of heartburn and epigastric pain when she lies down and during sleep. After examination, you diagnosed her as a case of gastroesophageal reflux disease. You advised her to modify life-style and diet, but without sufficient success. Which of the following is NOT acceptable therapy?

- a. Ranitidine
- b. Sodium bicarbonate
- c. Omeprazole
- d. Sucralfate
- e. Aluminum and magnesium hydroxides mixture (Maalox)

Answer: B

5) Best drug for the management of eclamptic seizures?

IV magnesium sulfate.

6) Pregnant developed DVT, first line anticoagulation?

LMWH.

7) Pregnant woman urine analysis is positive for nitrite and leukocytes even though she is asymptomatic. What is the most appropriate management?

Nitrofurantoin.

\*\*\* 8) Pregnant with pyelonephritis with E. coli?

Ceftriaxone.

9) Which of the following drugs you would select for treatment of pyelonephritis during pregnancy?

- a. Levofloxacin
- b. Co-trimoxazole
- c. Cefuroxime
- d. Nitrofurantoin
- e. Amoxicillin

Answer: C

10) Pregnant woman with long history of type 2 diabetes and two miscarriages. Her diabetes is poorly controlled on metformin and glyburide. Her HbA1c is 8.5 what is the most appropriate next step in management?

Discontinue all medications and start her on insulin.

11) Which of the following antiepileptic drugs has the highest risk during pregnancy?

- A. Valproic acid
- B. Phenytoin
- C. Carbamazepine
- D. Lamotrigine
- E. Gabapentin

Answer: A

12) A woman with long history of hypertension poorly controlled despite many medications found out that she is pregnant. US showed no amniotic fluid and 1000 g weight fetus. Baby was delivered with skeletal abnormalities and enlarged kidneys. Biopsy of kidneys showed tubular abnormalities. What teratogen causes this?

Losartan.

13) Which drug shouldn't be used for hypertension in the pregnancy?

Lisinopril.

14) G2P1 female presents with elevation blood pressure reading and proteinuria at 20 weeks gestation. All of the following drugs can be given except?

Lisinopril.

15) Which of the following antihypertensive drugs is absolutely contraindicated during pregnancy?

- a. Hydralazine
- b. Enalapril
- c. Magnesium sulfate
- d. Methyldopa
- e. Labetalol

Answer: B

16) Which of the following antihypertensive drugs is absolutely contraindicated during pregnancy?

- a. Valsartan
- b. Methyldopa
- c. Hydralazine
- d. Magnesium sulfate
- e. Labetalol

Answer: A

17) A pregnant woman at 28 weeks gestation experience regular uterine contractions every 3 minutes, the cervix was closed and elongated. Concerns about preterm labor which of the following therapy is justified?

The mother should take dexamethasone for 2 days.

18) Which of the following can be administered to the mother near term to prevent respiratory distress syndrome in preterm infant?

- a. Zidovudine
- b. Valproic acid
- c. Phenobarbital
- d. Thiopental
- e. Dexamethasone

Answer: E

19) All the following drugs can be used as tocolytic in preterm labor except?

Diazepam.

20) Maternal infection with group B streptococcus is associated with invasive disease of the newborn, and with increased risk of pregnancy loss, premature delivery, and transmission of the bacteria to the infant during delivery. Which of the following is the drug of choice for patients allergic to penicillin?

- a. Ampicillin
- b. Cefazolin
- c. Vancomycin
- d. Ciprofloxacin
- e. Clindamycin

Answer: B

\*\*21) You want to achieve cervical ripening in pregnant with 42-week gestational age?

Intracervical Dinoprostone.

22) Used for constipation in pregnancy:

Psyllium.

23) Used for GERD in pregnancy:

Mg and Al (Antacids).

24) Treatment of hyperthyroidism in pregnancy:

PTU and switch to Methimazole.

25) Treatment of pyelonephritis:

Ceftriaxone.

26) Wrong match:

PPI - increase Ca excretion.

27) Cervical ripening:

Dinoprostone.

## Therapy of epilepsy

1) Inhibitor of carbamazepine metabolism?

Valproate

2) Patient on carbamazepine therapy for tonic clonic seizure but still had frequent attacks of seizure so valproic acid was added. Several weeks later the patient developed neurological symptoms of diplopia and ataxia. What is the most likely explanation?

Valproic acid decreased the metabolism of carbamazepine

[note: valproic acid and topiramate are inhibitors]

3) Antiepileptic with most cognitive impairment?

Topiramate

4) Which of the following drug pairs metabolize vitamin D and cause osteoporosis with prolonged use?

Carbamazepine and phenytoin

5) Patient was on carbamazepine therapy for epilepsy. The physician kept increasing the dose over a period of weeks and the patient developed ataxia and nystagmus. Drug serum level was high at that point. Which of the following is wrong?

The drug was monitored correctly

6) Elderly on phenytoin since 25 years controlling his epilepsy, started complaining of incoordination, improved on lowering dose, still complaining of unsteadiness, next?

Lower dose again and monitor seizures

7) Elderlies have hypoalbuminemia, decreased hepatic blood flow and renal clearance. Which one of the following antiepileptic drugs is the most appropriate if used for the correct type of seizure?

Lamotrigine

8) Elderly with epilepsy?

Lamotrigine

[note: lamotrigine is considered the medication of choice in elderly]

9) Young patient with tonic clonic and mixed seizure, what is the best thing to give? \*\*

Carbamazepine

[note: carbamazepine is first-line in many seizure types: focal onset seizures, generalized tonic-clonic seizures, and mixed seizure types]

10) Patient was on carbamazepine treatment for epilepsy and developed cognitive side effects at therapeutic doses, so he was switched to phenytoin. Which of the following you should avoid to tell your patient about this dangerous drug?

Phenytoin has lower cognitive side effects compared to carbamazepine (mostly)

11) Was on phenytoin, developed strong skin reaction, switch to?

Valproate

12) Which one of the following drugs can cause idiosyncratic acute liver failure?

Valproic acid

13) Boy with myoclonic epilepsy. Drug of choice?

Valproic acid

[note: valproic acid is first-line therapy for generalized seizures, including myoclonic, atonic, and absence seizures]

14) 9-year-old with frequent blank staring, poor concentration ... learning difficulties, awareness lapses and eye blinking, best treatment? \*\*\*\*

Ethosuximide

[note: ethosuximide is the first-line treatment for absence seizures]

15) Uncontrolled, mixed-seizure epilepsy, phenytoin, VA and CMZ failed (resistant), next? \*\*

Lamotrigine

16) What is a dose dependent adverse effect ASD?

Lamotrigine and diplopia

17) Anti-seizure drug with carbonic anhydrase inhibitor effect?

Topiramate

18) Generalized tonic clonic seizures with neuropathic pain? \*\*

Gabapentin

19) Wrong combination of antiepileptic drug and its use?

Ethosuximide – absence seizures and neuropathic pain

20) Contraindicated in breastfeeding?

Zonisamide

[note: phenytoin, valproic acid, levetiracetam and zonisamide distribute to breast milk and cross the placenta]

21) Liver disease avoid?

Carbamazepine

22) Common side effect caused by ASD:

Impairment of cognition

23) Incorrect :

GI upset is a chronic side effect of ethosuximide

24) Incorrect:

Neonates require high dose of ASD

25) Isoniazid & phenytoin => increased toxicity

## Therapy of migraine

1) Long question about migraine patient taking many drugs, what is inappropriate in management?

Add another drug

2) Triptans... what can you add?

Corticosteroids

3) Drug not preventive in the treatment of migraine?

Carbamazepine

4) Not a problematic drug interaction:

metoclopramide & triptan

5) Migraine prevention & for anxiety:

Topiramate

6) correct:

valproic acid can be used to treat migraine

7) Not recommended in mild migraine :

Acetaminophen

## RATIONAL ANTIMICROBIAL SELECTION & ANTIMICROBIAL PROPHYLAXIS

- True about rational drug prescription is?  
**Specimen for culture should be taken at the time of Empirical drug**
- Wrong about therapy that avoids drug interactions (in a child with UTI)?  
**Should not start antibiotics before culture**
- Which of the following antibiotics should have adjustment of dose in patients having BOTH renal and hepatic disease?
  - a. Cefotaxime
  - b. Penicillin G
  - c. Gentamicin
  - d. Clindamycin
  - e. Erythromycin

Answer: **A**
- Which of the following medications needs to be adjusted in both renal and hepatic failure rather than only hepatic failure?  
**Piperacillin**
- All of the following need to be dose adjusted in hepatic disease except?  
**Gentamicin**
- Which of the following antibiotic classes is NOT matched with a correct agent that enhances its toxicity?
  - a. Aminoglycosides – vecuronium
  - b. Tetracyclines – sucralfate
  - c. Metronidazole – furosemide
  - d. Vancomycin – radiocontrast media
  - e. Macrolides – digoxin

Answer: **C**
- Wrong interaction?
  - a. Quinolones with antiarrhythmic cause QT prolongation
  - b. Rifampin decrease cyclosporine
  - c. Macrolide decrease gentamicin
  - d. Isoniazid increase carbamazepine

Answer: **C**
- Doesn't cause photosensitivity?
  - a. Tetracycline
  - b. Gentamicin
  - c. Sulfamethoxazole
  - d. Trimethoprim

Answer: **B**
- Which of the following antibiotics is NOT implicated in causing diarrhea and colitis secondary to clostridium difficile superinfection?
  - a. Amikacin
  - b. Clindamycin
  - c. Levofloxacin
  - d. Imipenem
  - e. Minocycline

Answer: **A**
- Not known cause of C. difficile? \*
  - a. Metronidazole
  - b. Tetracycline
  - c. Fluoroquinolone
  - d. Amoxicillin
  - e. Imipenem

Answer: **A**

Should be adjusted in severe liver disease:  
**clindamycin, erythromycin**, metronidazole, rifampin

Should be adjusted in both liver and renal dysfunction:  
nafcillin, sulfamethoxazole, **cefotaxime, piperacillin**



- Least cause of superinfection is?  
**Gentamycin**
- Which of the following side effects is mismatched?  
**Clindamycin and QT prolongation**
- Empiric antibiotic therapy for an infection is based on all of the following, EXCEPT? \*
  - a. Site of infection
  - b. Results of rapid identification tests
  - c. Local most offending pathogen
  - d. Physician opinion
  - e. Local antibiogram
 Answer: **D**
- Which of the following is NOT a cause of failure of antimicrobial therapy?
  - a. Immunosuppression
  - b. Concomitant drug that inhibits antibiotic metabolism
  - c. Presence of foreign bodies at site of infection
  - d. Cystic fibrosis
  - e. Short bowel syndrome
 Answer: **B**
- Best prophylactic for “elective” Colorectal surgery?  
**Oral neomycin and erythromycin**
- What is the appropriate surgical prophylaxis for a perforated appendix?  
**Cefazolin and metronidazole**
- Wrong antimicrobial prophylaxis?  
**Appendectomy .... Cefazolin**

**Note: cefazolin alone is NOT enough metronidazole must be ADDED**

- Wrong match about prophylaxis?
  - a. Craniotomy - cefazolin
  - b. C/S – cefotetan
  - c. Appendectomy – cefotetan and metronidazole
 Answer: **B**
- Wrong match about prophylaxis ?  
**Rheumatic fever with Cephalosporine**

**Note: we use benzathine penicillin for rheumatic fever prophylaxis**

Enhance **aminoglycosides** toxicity:

- a. Neuromuscular blocking agents
- b. Nephro- and Oto- toxins → amphotericin, cisplatin, cyclosporine, **furosemide**, NSAIDs, radiocontrast media, **vancomycin**

Enhance **tetracycline** toxicity:

- a. Antacids, iron, calcium, **sucralfate**
- b. Digoxin

Enhance **metronidazole** toxicity:

Drugs containing ethanol

Enhance **macrolides/azalides** toxicity:

- a. Digoxin
- b. Theophylline

Enhance **quinolones** toxicity:

- a. Class 1a and 3 antiarrhythmics  
**Increase Q-T interval**
- b. Multivalent cations (antacids, iron, sucralfate, zinc, vitamins, dairy products), citric acid, didanosine

**Rifampin** **increases metabolism** of azoles, **cyclosporine**, methadone, propranolol, protease inhibitors, oral contraceptives, tacrolimus, warfarin...

**Isoniazid** **decreases metabolism** of carbamazepine, phenytoin

Photosensitivity:

Azithromycin, quinolones, **tetracyclines**, pyrazinamide, **sulfamethoxazole**, **trimethoprim**

Clostridium difficile superinfection:

- **Penicillin & cephalosporins**
- **Carbapenems (imipenem)**
- Monobactams (aztreonam)
- Lipopeptides (daptomycin)
- **Tetracyclines**
- Chloramphenicol
- **Clindamycin**
- **Fluoroquinolones**

QTc prolongation:

- Fluoroquinolones
- Macrolides/Azalide

## THERAPY OF PNEUMONIA

- CAP outpatient with no comorbidity what to use?
  - a. Amoxiclav
  - b. Amoxiclav and doxycyclineAnswer: **A**
- Patient with previous history of asthma presents with fever and chest pain. His BP was 156/90, pulse was normal and his temperature was 38.7. A diagnosis of pneumonia was made. What is the management?  
**Amoxicillin-clavulanate and azithromycin**
- 75-year-old, with a picture of lobar pneumonia, RR 38/minute, BP 107/70 mmHg, BUN 12, and alert and oriented, best management?  
**Admit to medical floor and start levofloxacin**
- Patient admitted to the hospital as a case of pneumonia with patchy interstitial infiltrate on X rays, you choose?  
**Levofloxacin**
- MRSA what to use?  
**Vancomycin**
- Patient diagnosed with pneumonia from P aeruginosa, treatment?  
**Meropenem and ciprofloxacin**
- You choose 2 antipseudomonal antibiotics in case of?  
**There is structural lung disease**
- A boy was on a ventilator for treatment of pneumonia and had aggressive antibiotic therapy and after many times he developed VAP and cultures grow MRSA. What is the management?  
**Vancomycin**
- Neonatal Pneumonia, wrong?  
**Answers were not provided**
- What is the management of neonatal pneumonia by chlamydia trachomatis?  
**Azithromycin**
- Pneumonia caused by penicillin-resistant strep. pneumonia, you choose?  
~~Ceftriaxone~~ **vancomycin**
- Intrinsic Resistance to beta lactams?  
**Mycoplasma**
- Patient had hospital acquired pneumonia and his vital signs were deranged then he later developed meningitis. What is the management?  
**Cefepime and vancomycin (not sure)**
- 2 long cases about old patients with comorbidities one with COVID and other with positive urine pneumococcal, what to choose?  
**Answers were not provided**

## THERAPY OF MENINGITIS

- 65-year-old patient with headache, fever, nuchal rigidity, CSF hazy with no culture yet. best start on?  
**Vancomycin, ceftriaxone and ampicillin**
- An antibiotic that you can give with or without inflammation?  
**Levofloxacin**
- Case of meningitis caused by penicillin resistant strep. pneumoniae, you choose?  
**Vancomycin plus ceftriaxone**
- Patient had meningitis and culture revealed penicillin resistant streptococcus pneumonia. what is the most appropriate management?  
**Vancomycin and cefotaxime**
- Which of the following durations of therapy is wrong?  
**Neisseria meningitis - 21 days**
- Wrong match about meningitis treatment duration?  
**E. coli - 2 months**
- Brain abscess, you treat by?  
**Vancomycin plus ceftriaxone plus metronidazole**
- A patient with 1 year history of chronic sinusitis. Presents with altered mental status and fever. Exam revealed tenderness and discharge from the forehead at the frontal sinus. CT scan revealed a ring enhancing lesion. A diagnosis of brain abscess is made. What is the management?  
**Vancomycin, cefotaxime and metronidazole**
- What is the management of cryptococcal meningitis?  
**Amphotericin B and flucytosine**
- Not used in the treatment of cryptococcus neoformans?  
**Terbinafine**
- A child with acute bacterial meningitis with gram negative bacilli, wrong about therapy? \*  
**No need for rifampicin in adult contacts**
- What is used in N. meningitidis prophylaxis in pregnancy?  
**Ceftriaxone**

## THERAPY OF INFECTIONS IN NEUTROPENIC PATIENTS

- Neutropenic patients all indicated high risk except?  
>5 days
- Higher rate of adverse effects when you treat neutropenic fever by which of the following?  
Cefepime plus gentamicin
- All of the following drugs are used in high risk except?  
Answers were not provided
- For invasive aspergillosis?  
Voriconazole
- A patient with refractory pneumonia and an upper lobe nodule, treatment?  
IV voriconazole
- Not used in aspergillosis treatment?
  - a. Amphotericin
  - b. Flucytosine and voriconazoleAnswer: B
- True about viral treatment in neutropenic patient?
  - a. Treat all neutropenic with antiviral
  - b. Mild antiviral because it is not serious
  - c. Vesicular or ulcerative skin or mucosal rash we treat aggressivelyAnswer: C
- A patient on CHOP-R regimen for non-Hodgkin lymphoma developed fever, hypotension and dizziness 8 days after initiation of treatment, most likely ANC?  
200/Microliter
- Patient on chemotherapy developed pneumonia with neutropenia, started empirical Abx, may add?  
G CSF
- Adverse effect of (Filgrastim)?  
Bone pain