

1. **A 50 yo man has been taking amitriptyline for depression, but recently he has been feeling down once again. You give him sertraline to augment his treatment. After two weeks the patient experiences confusion, muscle twitches and profuse sweating. What is the diagnosis, and how could it have been avoided?**

Serotonin syndrome. Rules of pharmacology: maximize the drug (dose), then change drugs, then augment, then go to ECT.

2. **These patients see themselves as the center of attention. They believe they are special and often have a grandiose sense of importance. They have a sense of entitlement and require excessive admiration. They are arrogant and are preoccupied with fantasies of power and success. What diagnosis do they carry?**

Narcissistic personality disorder

3. **What is the number of half-lives required to reach the steady state of a drug? During what time of the pharmacokinetic curve do you measure the serum level to ascertain whether or not the steady state has been reached?**

Five \times $t_{1/2}$ = CSS, measure the serum level in the trough of the pharmacokinetic curve (ie. not right after taking a water-soluble drug)

4. **Which of these patients would ECT be warranted?**

50 yo man with no response to SSRI >>max SSRI, then TCA, MAOI, then augment, then ECT
28 yo pregnant woman with severe depression >>If drugs outweigh risk to child then OK, but most likely she would get ECT
36 yo woman with psychotic depression >>ECT

5. **A 35 yo man has difficulty finishing daily jobs, has lots of car accidents, is an underachiever, has trouble with organization and planning, he can't focus and can't sit still. The problems have been there for as long as he can remember. What is his diagnosis? When would these symptoms have had to be present?**

ADHD, no adult onset, must have been present before age 7, for six months, in a variety of locations

6. **A 3 yo boy has trouble playing with others. He is of average intelligence and must do everything in his routine. He flaps his hands often without reason. What does he have?**

Aspergers

7. **What two comorbidities are common with ADHD?**

Fetal alcohol syndrome, Tourette's

8. **I'm an 8 yo boy who doesn't do anything he's told. I hate authority, but I don't bully other kids. What's my problem?**

Oppositional Defiant Disorder

9. **Little Johnny ran away from home last week. This week he lied to his teachers and his parents, beat up a fat kid and stole his lunch money. What pharmacological treatment is available to little Johnny and others with his disorder?**

Atypical-antipsychotics (risperdal – antagonize D2 receptors and 5HT) (abilify – partial D2 agonist, 5HT antagonist)

10. **How are kids with enuresis treated?**

Bell and pad, imiprimine (inhibits NE, 5HT, TCA), DDAVP to reduce urine volume at night

11. **What is encopresis?**

Fecal incontinence – often due to constipation and overflow or power struggle with parents

12. **Adolescent drug users respond best to what type of therapy?**

Group therapy because peer pressure is really important in this age group

13. **What age group is most likely to have psychotic depression? 5-10 11-19 20-29 30-39**

11-19

14. **What circumstances are you required to break doc-pt confidentiality with regard to minors?**

Homicidal, suicidal, life-threatening disease, sexual or physical abuse, or dangerous behavior assoc. with ETOH or drugs

15. Which is more prevalent Bipolar I or Bipolar II?

Bipolar II – 5-15% Bipolar I - .4-1.6%

16. How long after a depressive episode does mania usually present?

6-10 years after the depressive episode

17. "I have to go home and clean my house because Elizabeth Shue is coming over tonight." What's wrong with me?

Delusional disorder

18. Is there a genetic link to bipolar, and what is it if there is one?

One parent = 25% Both parents = 50-75% Twins = 90%

19. What is a major chronic disease *causing*, not associated with, depression?

Thyroid dysfx

20. What neurotransmitters are implicated in depression?

Decreased DA, 5HT, NE, and increased cortisol

21. Compare and contrast melancholic with atypical depression: *age, reactivity, appetite, sleep, meds*

Melancholic: old, nonreactive, decreased appetite and sleep, TCA

Atypical: young, reactive, increased appetite and sleep, SSRI

22. What is the CASE approach to assessing suicide ideation?

1st: presenting event 2nd: recent events 3rd: Past events 4th: Future plans

23. I'm so preoccupied with rules, lists and organization of a project, that I never actually get it done. I don't let anyone help because I know they won't do it the right way. My friends think I'm tight with money, but I'm just planning for the day when I'll really need it, like if my car is stolen and I need to replace it right away. What's wrong with me and how would you treat me?

OCD – Tx: cognitive behavioral therapy, SSRI (prozac, Zoloft)

24. Sam thinks because four cars pass his house in the morning before work, that there's a great likelihood of him being hit by a bus. He believes in magic, dresses strange and acts oddly. He has no close relationships. He does NOT have delusions or hallucinations. What's wrong with Sam?

Schizotypal personality disorder

25. "Holy crap, stop it... stop looking at me, you're reading my mind and poisoning it with your vile... (long pause)... Because the bunny ice cream ran flowers computer, I song bubbles follow." What's the diagnosis and neuro path?

Schizophrenia – decreased mesocortical DA, increased mesolimbic DA, increased 5HT and decreased GABA, brain atrophy, big ventricles

26. Describe the technique of "denial of the specific."

Someone denies a vague, general question, like, "do you do drugs?" So you come back with, "Have you smoked marijuana?"

27. Which of these drugs is associated with a pseudo-Parkinsonism? Haldol, amitriptyline, trifluoperazine, fluoxetine

trifluoperazine

28. A patient is on lithium (600mg BID (max 1800mg/day) and still experiencing symptoms. He is then put on chlorpromazine 100mg (max 1000 mg/day). The patient is at risk for developing what serious complication? What other options are available?

Tardive dyskinesia and neuroleptic malignant syndrome from the thiorazine. The patient should've been maxed out on lithium before introducing a new drug.

29. The typical "falling" sensation right before falling asleep is referred to as what?

Hypnagogic hallucination

30. Which DA pathway is responsible for positive sx, and which is responsible for negative sx in psychosis?

Mesocortical – negative sx, decreased social interaction and cognition Mesolimbic – positive sx, hallucinations and delusions

31. A 35 yo woman has intense, unstable relationships. She is emotionally unstable and impulsive. What is her likely diagnosis? *BPD, ASPD, Schizoid, Histrionic*

BPD (borderline personality disorder)

32. A beautiful woman who takes care to look her best each day has trouble with relationships, and has no taste for sex. What is her likely diagnosis? *Narcissistic, ASPD, Schizoid, Histrionic*

Histrionic

33. Which of these things can cause anxiety?

Hypothyroidism Pheochromocytoma CHF COPD EtOH Weed Cocaine Insulin Gasoline

All of the above

34. What is the only FDA-approved hypnotic for long-term use?

Lunesta

35. A popular BZD that has rapid onset and long duration is?

Diazepam (Valium)

36. Which part of the mental status exam includes INSIGHT? *GABA, Mood & Affect, Thought Process, Thought Content Sensorium & Cognition*

Sensorium & Cognition

37. How do schizophrenic and borderline auditory hallucinations differ?

Schizophrenia – command, clear voice Borderline – brief, vague, name being called out

38. What does Axis II of the DSM encompass?

MR and personality disorders

39. What is the first stage of psychotherapy?

Engagement – develop rapport with the patient

40. An 80 yo woman visits a 50 yo male therapist for bipolar disorder. She is very pleasant at every session, commenting on his clothing and even bringing him cookies. She often talks about her son and how she wished he had become a doctor. At the end of every session she hugs him and gives him advice on daily life events. The therapist enjoys this and even asks her opinion on what he should get his wife for Christmas. What type of counter-transference or transference is going on here?

Patient-originated transference and patient-originated counter-transference

41. A 25 yo male patient is made fun of for seeing a therapist for his depression. After the second session he never returns. What is this phenomenon referred to? And which of the three types is this an example of?

Resistance due to the patient's social network

42. In the last six months, 16 yo Billy Badass has run away from home, set two fires in the back yard, beat up a freshman and was arrested for bashing mailboxes. What is his problem and how is it treated?

Conduct disorder – risperidone or lithium along with parental and child counseling

43. Dave has been depressed for 20 years, with no history of major depressive, manic or mixed episodes. Likely diagnosis?

Dysthymia – note major depressive disorders can be present, just not within the first year of the disease

44. From what is 5-HT synthesized and what is the rate limiting step?

Tryptophan > tryptophan hydroxylase > 5-HTP > 5-HT

45. What is a common, long-acting (t1/2=6days) SSRI that is often the first drug prescribed?

Prozac (fluoxetine)

46. What major disease in the elderly is attributed to decreased Ach levels?

Alzheimers

47. Where is glutamate synthesized and is it excitatory or inhibitory?

Glial cells (recycled), excitatory

48. I'm a smoker whose been trying to figure out a way to quit. I know its bad, and its important to me, so I'm working on a plan. What stage am I in? Preparation Contemplation Precontemplation Action

Preparation

49. Which of these statements is consistent with the idea of contiguity?

I feel the same sadness that my patient feels.

Concordant

I believe the television is putting thoughts in my head.

Delusion

I hit a home run while wearing blue socks, so I'm going to wear them every game.

Contiguity

I criticize the therapist at every turn, making it difficult to treat me.

Resistance

50. T or F Closing your eyes while diving is an unconditioned response, so the water would be a neutral stimulus.

False – closing your eyes is an unconditioned (natural) response, but the water wouldn't be a neutral stimulus, because a neutral stimulus does not elicit an unconditioned response.

51. T or F Pairing a negative behavior with a painful stimulus is called aversion conditioning and it is often a successful treatment.

False – it has been proven quite unsuccessful

52. Which type of reward is most resistant to extinction? Continuous, fixed interval, or random

Random

53. What is the difference between systematic desensitization and graded exposure?

SD incorporates a relaxation technique while learning to face fears slowly.

54. What psychological basis underlies hypnosis?

None

55. Which of these is not a stimulant medication? Ritalin, Concerta, Adderall, Strattera

Strattera – atomoxetine: NE reuptake inhibitor

56. A 15 yo patient tells stories of how he and his friends will have a few beers on the weekend. Do you tell mom and dad?

No, only if they are engaging in dangerous activity while boozing.

57. Why can antipsychotics cause neuroleptic malignant syndrome?

Inhibit D2 receptors in the nigrostriatum and hypothalamus > rigidity

58. Name three criteria for substance dependence.

Tolerance, withdrawal, increasing amount, unsuccessful quits, lots of time w/it, giving up important activities, continued use despite health problems

59. What are the criteria for substance abuse?

1 or more of: failure to fulfill duties, drunk driving (dangerous activities), assoc. legal problems, recurrent social problems, no dependence symptoms

60. What changes in dosage would you likely make in geriatric medicine?

Because of decreased renal and hepatic function, dosages/dosing intervals should be either decreased or increased dependent upon the drug. (ie. a drug cleared by the kidneys should be decreased or given with increased intervals to guard against toxicity)

61. How can you differentiate between dementia and delirium?

Delirium: transient, varying levels of consciousness, reversible, illness/medication related
Dementia: persistent, alert, stable

62. Compare and contrast Alzheimer's and vascular dementia.

Alzheimer's: slow, insidious onset, short-term memory loss early, long-term memory loss late, loss of executive fx (planning)
Vascular: stepwise decline with each vascular event, acute changes

63. What is characteristic of Lewy body dementia?

Parkinsonism and dementia with early hallucinations

64. What common CV drug causes the most drug interactions?

Warfarin

65. What else should be done besides a BUN/Cr ratio to assess renal function?

Estimate renal function using Cockcroft Gault creatinine clearance equation

66. Increased percentage of fat means what for many drugs?

More volume of distribution with fat-soluble drugs

67. What four categories cause delirium?

DIMS – drugs, infection, metabolic, systemic

68. What are some risk factors for Alzheimer's?

Age, female, low education, high cholesterol, traumatic brain injury, stroke

69. Most cases of Alzheimer's are: sporadic, amyloid-related or Apo E-4 related?

Sporadic

70. Which is inside the neuron and which is outside: neurofibrillary tangles, plaques?

Tangles: inside Plaques: outside (composed of amyloid)

71. What receptor is implicated in Alzheimer's amnesia?

NMDA receptors

72. When is it appropriate for doctors to pray or provide religious services to patients?

Only when there is no clergy available and when it is explicitly requested

73. ECT carries with it about the same risk as what?

Anesthesia

74. Depression is associated with decreased function of the _____ side, and mania is associated with the _____ side.

Left; right

75. Where are the neurons for NE located and what inhibits that area?

The locus coeruleus is inhibited by GABA and serotonin, so SSRI, TCA, MAOI and BZD all work to control anxiety.

76. What drug should be used for treatment-resistant schizophrenia?

Clozapine is a DA, 5-HT₂ and cholinergic receptor antagonist.

77. Why do atypicals work better than typical antipsychotics?

They have the DA blocking effects, while the serotonin effects stop the dyskinesias

78. Selegine and phenelzine are what class?

MAOI

79. TCAs combine what four actions?

SRI, NRI, anti-cholinergic and alpha agonist effects

80. Venlafaxine has an interesting dose-related effect, what is it?

The more you give, the more effects you'll see on depression and anxiety. The progression follows: SRI > NRI > DRI

81. Why would you use trazadone?

Insomnia

82. What does lithium do?

Blocks DA and NE release from the presynaptic neuron.

83. What major NT's are involved in ADHD?

NE, DA

84. What is splitting?

A narcissistic defense mechanism where something is either "all good," or "all bad."

85. What four diseases are associated with hypermetabolic amygdalas?

Panic, PTSD, depression, OCD, anxiety, aggression

86. How is selective mutism treated?

SSRI

87. What causes EPS?

Long-term (or high-dose) blockade of D₂ receptors causes upregulation of the receptors and subsequent dyskinesias associated with hypersensitive receptors. If the dopamine-antagonists (haldol, risperdol, etc) are removed, the dyskinesias are increased in severity.

88. What drug would you give for BZD overdose?

Flumazenil allosterically binds to BZD receptor on chloride channel.

89. What's the difference between schizophrenia, schizophreniform, schizotypal, schizoaffective and schizoid?

Schizophrenia: hallucinations, thought blocking, delusions, word salad
Schizophreniform: present for less than 6 mos
Schizotypal: no hallucinations, dress weird, ideas of reference, believes in magic
Schizoaffective: schizophrenia with mood disorder which is transient
Schizoid: withdrawn, loner, indifferent, no emotion to anything

90. Pressured speech with flight of ideas is consistent with what disorder?

Mania – note that mania need not always be fun and crazy, manics can be extremely irritable and violent

91. Who treats most cases of depression?

80% are treated by PCP's

92. What percentage of people with chronic diseases are depressed?

About 60%

93. What sleep wave pattern is characteristic of depression?

Delta wave sleep with decreased REM latency (quickly dream) and increased REM density (dream often).

94. When do the first clues (not criteria) of schizophrenia begin?

At birth dysfunction can pinpoint that may lead to schizophrenia

95. Positive symptoms of schizophrenia are correlated with what pathway? Negative symptoms?

Positive: mesolimbic Negative: mesocortical

96. What is the metabolite of DA synthesis?

Tyrosine > tyrosine hydroxylase > L-dopa > dopa hydroxylase > dopamine > dopamine hydroxylase > NE
DA is broken down by MAO into HVA

97. Atypical antipsychotics act on what NT more than the other?

5HT₂ > DA ...note: typicals are opposite DA > 5HT₂

98. What is dystonia and how is it treated?

Involuntary, painful, and commonly sustained muscle contraction. Often seen with the neck turned to one side. Treat with diphenhydramine or benztropine.

99. What is akathisia and how is it treated?

Sense of body restlessness. Treat with anticholinergics or beta blocker. (BBs are not as effective)

100. What is the mean time for a patient to develop tardive dyskinesia?

About 6 months. Most patients don't have symptoms before that time.

101. What are some instances to use antipsychotics?

Schizophrenia, shizoaffective, bipolar, oppositional-defiant, conduct disorder, antisocial personality disorder

102. What does egosyntonic mean?

The patient doesn't believe there is anything wrong.

103. What personality disorder is characterized by a “swiss-cheese” superego?

ASPD

104. I’m dedicated to work and must have everything in its place. I also find little joy in anything. What is my personality disorder?

Compulsive

105. What common drug will trigger a panic attack in those with panic disorders?

Caffeine will trigger in 70% of cases

106. What part of the brain is implicated in OCD?

Hypermetabolic right caudate

107. A naked kid running around in the mall is likely to have what kind of disorder?

Disinhibited reactive detachment disorder

108. What is numbing?

Shutting down all emotion to avoid feeling the fear associated with PTSD. They also have symptoms of re-experience and hypervigilance.

109. How much more likely to commit suicide are patients with PTSD?

6x

110. What is first line treatment of PTSD?

SSRI

111. Which is worse/prevalent: generalized or nongeneralized social anxiety disorder?

Generalized SAD is more prevalent, more severe and has a younger onset

112. Who has the highest prevalence of PTSD, men or women?

Women

113. Which is better for PTSD psychotherapy, talking about the event, using SSRIs, or suppressing the memory of the event?

Suppressing the memory of the event should not be done, the other two are viable options.

114. Why is smoking a problem with schizophrenics more so than normal people?

Smoking decreases availability of antipsychotic medications

115. High doses are for _____ and low doses are for _____ in regards to anxiety and insomnia.

High dose: insomnia Low dose: anxiety

116. What has always been the most popular hypnotic?

Alcohol

117. Barbiturates are absorbed where? Why aren’t they used more often?

Stomach (weak acids) High toxicity (coma and death)

118. BZD's are absorbed where? What has an intermediate onset and duration?

Sm. Intestine Xanax has intermediate onset and duration

119. What drug used for bone marrow transplant side effects and dystonia, is also used as a hypnotic?

Diphenhydramine

120. What drug works like a BZD, but without the BZD side effects?

Zolpidem (Ambien) binds to the BZD receptor, but causes only a hypnotic effect

121. What does a CYP 2D6 inhibitor do?

Decrease availability of prodrugs and increase availability of active drugs.

122. What antidepressant should a glaucoma patient not receive?

TCA

123. What antidepressant would be best for pregnancy?

Welbutrin is a class B drug; Prozac (fluoxetine) has some evidence to show it is safe in pregnancy as well

124. Your first choice of antidepressant should be?

SSRI

125. What main side effects are associated with SSRIs?

Nausea, sexual dysfunction, insomnia, EPS

126. What is the major cause of noncompliance with lithium?

Weight gain

127. Who can't take lithium?

DM, ulcerative colitis, psoriasis, cataracts (SE: renally excreted, nephrotic syndrome, hypercalcemia)

128. What anti-epileptic causes transient leukopenia?

Tegretol (carbamazepine)

129. What is a somatoform disorder and what is its prevalence?

Clinically significant somatic complaint with no organic cause. Occurs in about 25% of population.

130. What are three features of somatoform disorders?

Multiple organ systems, acute onset with chronic course, absent lab abnormalities

131. What are the diagnostic criteria for somatoform disorders?

4 pain sx, 2 GI sx, 1 sexual sx, 1 pseudo-neuro sx > symptoms are not intentional

132. Categorize a conversion disorder by: sex, economics, disease course, organ system, pt. Intention

Conversion disorders are the manifestation of physical symptoms due to a psychiatric illness: women, poor, self-limited disease, neuro symptoms, symptoms are not intentional

133. What type of somatoform disorder is the most suggestive?

Conversion

134. What is the difference between factitious disorder and malingering?

Malingering: lying about an ailment for external gain (workman's comp)

Factitious: lying about an ailment for the purpose of being in the doctor's office – no external gain wanted

135. What psych disorder is most commonly associated with substance abuse?

Anti-social personality disorder

136. "Pin-point pupils," are consistent with what drug intoxication?

Opioid

137. How much healthier are spiritual people?

Spirituality has been shown to have the approximate effect of being a non-smoker.

138. What is a major point of psychotherapy with elderly patients?

Conflict resolution is a big part of wellness. Many feel they didn't accomplish what they wanted in life.

139. What is the first thing to do before prescribing meds?

Review current medications

140. A boxer is at increased risk for what psychiatric disease?

Alzheimer's mainly

141. What genotype is strongly associated with Alzheimer's?

Apo E-4

142. Overactive NMDA receptors are seen in what two diseases?

Mania and Alzheimer's

143. Early hallucinations in elderly dementia is indicative of what disease?

Lewy body dementia

144. With what two drugs can withdrawal be fatal?

BZD, alcohol