

Answer: A

1. The original definition of “ atypical” antipsychotics was used for describing (choose the correct answer):
 - A. A drug with low risk of EPS
 - B. A drug with low risk of inducing weight gain
 - C. A drug that caused improvement of cognitive symptoms
 - D. A drug that reduced prolactin
2. Which of the following receptor subtypes is involved in the mechanism of action of second generation antipsychotics?
 - A. M1
 - B. H1
 - C. 5HT2A
3. Regarding the use of antipsychotics for dementia, choose the correct answer:
 - A. Second-generation antipsychotics have proven effective for cognitive symptoms in Alzheimer’s disease.
 - B. Antipsychotic drugs are not approved for the management of behavioral symptoms in dementia.
 - C. Clozapine is more effective than first generation antipsychotics for behavioral disturbances.
 - D. Second generation antipsychotics are ineffective for the treatment of acute episodes.
4. Choose the antipsychotic with the lowest risk of hyperprolactinemia and extrapyramidal symptoms:
 - A. Chlorpromazine
 - B. Aripiprazole
 - C. Fluphenazine
 - D. Haloperidol
5. Regarding the definition of treatment-resistant depression presented in this course, choose the correct description:
 - A. Failure to respond adequately to three successive courses of monotherapy with antidepressants from the same pharmacological class, given in an adequate dose for sufficient length of time.
 - B. Failure to respond adequately to two successive courses of monotherapy with pharmacological different antidepressants, given in an adequate dose for sufficient length of time.
 - C. Failure to respond adequately to three successive courses of monotherapy with pharmacological different antidepressants, given in an adequate dose for sufficient length of time.
 - D. Failure to respond adequately to electroconvulsive therapy (ECT).

Mechanism of Action

A. Clinical

- 1. “Atypical” antipsychotics, or SGAs, were first identified as having less risk of EPS vs. FGAs at doses producing antipsychotic effects
- 2. Originally thought to be better for negative symptoms because of effects on the mesocortical dopamine pathway in the midbrain-ventral tegmentum, although this has not been proven in clinical trials
- 3. May be due to not causing secondary negative symptoms as compared to having positive effects on negative symptoms

6. Only one of the following antipsychotic medications is approved by the FDA for the treatment of acute manic/mixed episodes, as maintenance treatment and for the treatment of bipolar depression. Choose the drug approved for the three indications above mentioned:

	Acute	Chronic
Manic	Antipsychotics Mood Stabilizers	Mood Stabilizers
Depressive	Mood Stabilizers	Mood Stabilizers

- A. Chlorpromazine
B. Asenapine
C. Clozapine
D. Quetiapine

7. One of the following is part of the clinical features of dystonia, choose the correct answer:

- A. Cogwheel rigidity
B. Pill rolling movements
C. Masklike facies
D. Retrocollis and laterocollis

8. Which of the following is not part of the clinical features of the movement pattern in tardive dyskinesia? Choose the correct answer:

- A. Repetitive movements
B. Abnormal movements
C. Stereotyped movements
D. Painful movements

9. Regarding the effectiveness and side effects profile of first and second generation antipsychotics in the treatment of schizophrenia, choose the correct answer:

- A. Second-generation antipsychotics are ineffective for the treatment of acute episodes.
B. Second-generation antipsychotics are less effective for treating secondary symptoms than first generation antipsychotics.
C. First and second-generation antipsychotics are effective for the treatment of positive symptoms.
D. First-generation antipsychotics are effective for the treatment of positive, negative and cognitive symptoms.

10. One of the following drugs is a first-generation antipsychotic with affinity for H1 receptors (sedative profile) and for alpha 1 receptor (risk of orthostatic hypotension). Choose the correct answer

- A. Quetiapine
B. Chlorpromazine
C. Clozapine
D. Haloperidol

11. Which of the following drugs are associated with the highest risk of causing weight gain? Choose the correct answer:

- A. Risperidone and quetiapine
B. Haloperidol and perphenazine
C. Clozapine and olanzapine
D. Aripiprazole and ziprasidone

12. A tetrad has been proposed for the clinical features of the neuroleptic malignant syndrome. Choose the option that covers the four clinical signs and symptoms that help in the diagnosis of NMS:

- A. Hypothermia, dystonia, mental status changes and autonomic instability.
B. Hyperthermia, dystonia, mental status changes and autonomic instability.
C. Hyperthermia, rigidity, mental status changes and seizures.

- D. Hyperthermia, rigidity, mental status changes and autonomic instability.
13. Choose the receptor type involved in orthostatic hypotension:
- A. H1
 - B. Alpha 1
 - C. D2
 - D. M1

B

14. Which of the following antipsychotics requires sublingual administration? Choose the correct answer:

- A. Lurasidone
- B. Asenapine
- C. Iloperidone
- D. Paliperidone

B

15. Which of the following antipsychotics is a partial agonist at D2 receptors? Choose the correct answer:

- A. Haloperidol
- B. Clozapine
- C. Clozapine
- D. Quetiapine
- E. Aripiprazole

E

16. Which of the following condition is associated with long-term use of lithium in mood disorders? A. Tardive dyskinesia

- B. Hypoglycemia
- C. Hyperprolactinemia
- D. Hypertension
- E. Hypothyroidism

E

Short term (days or weeks)	Diarhea, abdominal discomfort
	Dysgeusia, nausea
	Tremor, ataxia
	Polydipsia, polyuria
	Dry mouth, dysarthria
Intermediate to long term (weeks or months)	Drowsiness, slowed mentality
	Nausea, diarrhea
	Tremor, ataxia
	Polydipsia, polyuria
	Diabetes insipidus
Long term (months or years)	Myeloproliferation
	Decreased renal function
	Hypothyroidism
	Tremor, ataxia
	Acne, alopecia

17. A common adverse effect of Venlafaxine is:

- A. Hypersalivation
- B. Bradycardia
- C. Increase in blood pressure
- D. Decrease in blood pressure
- E. Tinnitus

D

18. Which of the following antidepressants has relatively short biological half-life?

- A. Fluoxetine
- B. Trazodone
- C. Mirtazapine
- D. Citalopram
- E. Imipramine

D

19. Highest rate of sexual dysfunction is reported with:

- A. Mirtazapine
- B. Citalopram
- C. Bupropion
- D. Paroxetine

D

20. Which of the following antidepressants requires therapeutic blood monitoring for safe use?
- A. Bupropion
 - B. Paroxetine
 - C. Venlafaxine
 - D. Nortriptyline
 - E. Phenelzine
21. Combining MAOIs with SSRIs may cause
- A. Extrapyrimalidal Symptoms (EPS)
 - B. Agranulocytosis
 - C. Neuroleptic Malignant Syndrome (NMS)
 - D. Serotonin Syndrome
22. Which of the following is known to have least cardiovascular side effects?
- A. Clomipramine
 - B. Amitriptyline
 - C. Citalopram
 - D. Imipramine
23. Which antidepressant is contraindicated in a patient with seizure disorder?
- A. Mirtazapine
 - B. Fluoxetine
 - C. Venlafaxine
 - D. Bupropion
 - E. Nefazodone
24. Which of the following antidepressant is approved by FDA for Smoking cessation?
- A. Bupropion
 - B. Fluvoxamine
 - C. Venlafaxine
 - D. Paroxetine
25. What is the best antidepressant prescribed for a patient with hypotension and cardiac disease?
- A. Mirtazapine
 - B. Venlafaxine
 - C. Escitalopam
 - D. Duloxetine
26. Penile priapism is known to be associated with use of
- A. Escitalopram
 - B. Bupropion
 - C. Venlafaxine
 - D. Trazadone
 - E. Mirtazapine
27. The recommended dose of duloxetine for major depressive disorder is
- A. 37.5-75 mg/day
 - B. 40– 60 mg/day
 - C. 75-150 mg/day
 - D. 300– 600 mg/day

A

28. Sedation associated with use of antidepressants is attributed to the
- A. Blockade of histamine H1 receptor
 - B. Blockade of muscarinic acetylcholine receptors
 - C. Antagonism of 5-HT₂ receptors
 - D. Blockade of alpha-1-receptors
29. Which of the following is NOT associated with use of Tricyclic Antidepressants (TCA)?
- A. Urinary Incontinence
 - B. Dry mouth
 - C. Constipation
 - D. Blurred vision
30. Therapeutic options for refractory depression include all, EXCEPT:
- A. Glucocorticoid therapy
 - B. Stimulant augmentation
 - C. Thyroid hormone supplementation
 - D. Lithium Augmentation
 - E. Transcranial magnetic stimulation
31. Which of the following antidepressants is most selective for inhibition of neuronal reuptake of serotonin?
- A. Sertraline
 - B. Bupropion
 - C. Mirtazapine
 - D. Venlafaxine
 - E. Imipramine
32. Which of the following term refers to the way the body handles the drug?
- A. Pharmacodynamics
 - B. Pharmacoeutics
 - C. Pharmacokinetics
 - D. Pharmacotherapeutics
33. Which drug in the SSRI group of antidepressant has a half-life of 2-4 days:
- A. Fluoxetine
 - B. Sertraline
 - C. Escitalopram
 - D. Paroxetine
34. A drug which is postulated to be an inhibitor of dopamine- β -hydroxylase, which catalyzes the conversion of dopamine into norepinephrine, leads to an increase in brain dopamine levels:
- A. Disulfiram
 - B. Desipramine
 - C. Phenezine
 - D. Aripiprazole
35. Fluoxetine belong to which class of drug:
- A. TCAs
 - B. MAOIs
 - C. SSRIs
 - D. SNRIs

A

36. The commonly used TCA in obsessive compulsive disorder is:
- A. Dothiepin
 - B. Clomipramine
 - C. Amitriptyline
 - D. Nortriptyline
37. Which is not an anticholinergic:
- A. Procyclidine
 - B. Buspirone
 - C. Benztropine
 - D. Trihexiphenidyl
38. Depot preparation for which of the following drugs is not available:
- A. Fluphenazine
 - B. Haloperidol
 - C. Flupenthixol
 - D. Pimozide
39. Which of the following is a butyrophenone?
- A. Trifluoperazine
 - B. Prochlorperazine
 - C. Pimozide
 - D. Fluphenazine
 - E. Haloperidol
40. Which of the following mechanism is considered to be the cause of extrapyramidal reactions?
- A. D2-receptor up-regulation
 - B. Alpha-adrenoceptor blockade
 - C. D2-receptor blockade
 - D. H1 histamine receptor blockade
41. Which of the following statements about side effects of antipsychotics (AP) is NOT correct?
- A. APs produce menorrhagia and increased libido in women
 - B. APs produce decreased libido and gynecomastia in men
 - C. APs cause inhibition of prolactin secretion
 - D. Low-potency APs cause orthostatic hypotension
42. Which of the following antipsychotics is known to elevate serum prolactin levels?
- A. Clozapine
 - B. Quetiapine
 - C. Amisulpride
 - D. Aripiprazole
43. Which drug may be useful in the management of the neuroleptic malignant syndrome, although it can worsen the symptoms of schizophrenia?
- A. Haloperidol
 - B. Thiothixene
 - C. Risperidone
 - D. Valproic acid
 - E. Bromocriptine

44. Which neuroleptic agent has the lowest likelihood of producing tardive dyskinesia?
- A. Clozapine
 - B. Imipramine
 - C. Fluoxetine
 - D. Thiothixene
 - E. Chlorpromazine
45. Antagonism of which dopaminergic pathway is attributed to be the cause of therapeutic actions of antipsychotic drugs?
- A. Tuberoinfundibular pathway
 - B. Mesolimbic– mesocortical system
 - C. Nigrostriatal system
 - D. Reticular activating system
46. Which of the following is a phenothiazine?
- A. Clozapine
 - B. Chlorpromazine
 - C. Olanzapine
 - D. Risperidone
 - E. Haloperidol
47. Tardive dyskinesia after long-term antipsychotic administration is thought to be due to
- A. Loss of cholinergic neurons in striatum
 - B. Enhanced stimulation of D2 dopamine autoreceptors
 - C. Increased tolerance to antipsychotic agents
 - D. A decrease in dopamine synthesis
 - E. Up-regulation of striatal dopamine receptors
48. Which of the following agents possesses pharmacological actions characterized by high antipsychotic potency and high potential for extrapyramidal toxicity?
- A. Carbamazepine
 - B. Thioridazine
 - C. Haloperidol
 - D. Flumazenil
 - E. Clozapine
49. Which of the following manifestations is NOT caused by blockade of Muscarinic cholinoreceptor?
- A. Constipation
 - B. Urinary retention
 - C. Blurred vision
 - D. Amenorrhea
 - E. Dry mouth
50. Which category of drugs are associated with neuroleptic malignant syndrome?
- A. Antidepressants
 - B. Anticholinergics
 - C. Mood stabilizers
 - D. Antipsychotics
 - E. Anxiolytics

51. Which of the following central dopaminergic pathway is associated with antipsychotic efficacy?
- A. Mesolimbic
 - B. Nigrostriatal
 - C. Mesocortical
 - D. Tuberoinfundibular
52. Which is not an extrapyramidal symptom?
- A. Acute dystonia
 - B. Akathisia
 - C. Agnosia
 - D. Drug-induced parkinsonism
53. A common adverse effect shared by clozapine, olanzapine and risperidone is:
- A. Sialorrhea
 - B. Weight gain
 - C. Seizures
 - D. Agranulocytosis
54. Buspirone belongs to which class of drug:
- A. Benzodiazepines
 - B. Tricyclic
 - C. Azapirones
 - D. SSRIs
55. A condition hypothesised to be due to dopamine post-synaptic supersensitivity in the basal ganglia is:
- A. Akathisia
 - B. Pseudoparkinsonism
 - C. Tardive dyskinesia
 - D. Neuroleptic malignant syndrome
56. Fundamental property of antipsychotic drugs is:
- A. Blockade of reuptake of serotonin
 - B. Dopamine post-synaptic receptor blockade
 - C. Increase the neurotransmission in GABA receptors
 - D. Blockade of reuptake of norepinephrine
57. A subjective feeling of motor restlessness develops following treatment with antipsychotics is termed as:
- A. Agnosia
 - B. Dyskinesia
 - C. Dystonia
 - D. Akathisia
58. An important side effect of zopiclone is:
- A. Nystagmus and double vision
 - B. Extrapyramidal symptoms
 - C. A bitter taste associated with excretion in saliva
 - D. Respiratory depression

59. Which of the following central dopaminergic pathway is associated with hyperprolactinaemia and its consequences?
- A. Tuberoinfundibular
 - B. Mesocortical
 - C. Nigrostriatal
 - D. Mesolimbic
 - A.
60. Involuntary spasmodic contraction of a group of muscles is termed as:
- A. Rabbit syndrome
 - B. Tardive dyskinesia
 - C. Dystonia
 - D. Akathisia
61. Which is NOT an intervention in the management of neuroleptic malignant syndrome?
- A. Use of lorazepam to treat catatonia
 - B. Use of haloperidol to control agitation
 - C. Discontinuation of the antipsychotics
 - D. Use of bromocriptine
62. Hypersalivation is a paradoxical adverse effect observed in treatment with
- A. Ziprazidone
 - B. Chlorpromazine
 - C. Trihexyphenidyl
 - D. Clozapine
63. A schizophrenic patient on treatment with pimozide reports that he cannot keep still and feel a compulsion to move. These symptoms are characteristics of
- A. Drug-induced Parkinsonism
 - B. Acute dystonia
 - C. Serotonin syndrome
 - D. Neuroleptic Malignant Syndrome
 - E. Akathisia
64. Paroxetine is a:
- A. Antipsychotic drug
 - B. Used in opiate poisoning
 - C. Tricyclic antidepressant
 - D. Selective serotonin reuptake inhibitor
65. Imipramine is mainly used as a:
- A. Sedative
 - B. Tranquilizer
 - C. Antidepressant
 - D. All of the above
66. Nausea is a troublesome side effect of the following antidepressant:
- A. Doxepine
 - B. Fluoxetine
 - C. Trazodone
 - D. Mianserin
67. Which antidepressant found to be associated with tardive dyskinesia and neuroleptic malignant syndrome?
- A. Amoxapine
 - B. Trazodone

- C. Fluoxetine
 - D. Amineptin
68. Blood levels of neuroleptics are useful to check the following:
- A. Toxicability
 - B. Therapeutic levels
 - C. Resistance
 - D. All of the above
69. Neuroleptic malignant syndrome is characterized:
- A. Bradycardia
 - B. Labile hypertension
 - C. Hypotonia
 - D. Hypothermia
70. Contraindications to lithium administration include:
- A. An administration in combination with chlorpromazine
 - B. The presence of renal disease
 - C. Any occurrence of the symptoms of schizophrenia
 - D. The presence of depression
 - E. An administration in combination with imipramine