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D. Pharm Exit Exam - 2024

Course Name	: D. Pharm
Year	: First Year
Subject Name	: Pharmaceutical Chemistry
Topic Name	: Antidepressants

MULTIPLE CHOICE QUESTION

1. What is the primary mechanism of action of selective serotonin reuptake inhibitors (SSRIs)?

- a) Inhibition of serotonin and norepinephrine reuptake
- b) Inhibition of monoamine oxidase
- c) Enhancement of serotonin neurotransmission
- d) Blockade of dopamine receptors

Answer: c) Enhancement of serotonin neurotransmission

2. Which of the following is a commonly prescribed SSRI?

- a) Amitriptyline
- b) Venlafaxine
- c) Fluoxetine
- d) Phenelzine

Answer: c) Fluoxetine

3. Tricyclic antidepressants (TCAs) primarily inhibit the reuptake of which neurotransmitters?

- a) Serotonin and dopamine
- b) Serotonin and norepinephrine
- c) Norepinephrine and dopamine
- d) GABA and glutamate

Answer: b) Serotonin and norepinephrine

4. Which antidepressant class is known for its potential anticholinergic side effects?

- a) SSRIs
- b) TCAs
- c) MAOIs
- d) Atypical antidepressants

Answer: b) TCAs

5. Monoamine oxidase inhibitors (MAOIs) work by inhibiting the breakdown of which neurotransmitters?

- a) Serotonin and norepinephrine
- b) Dopamine and GABA
- c) Norepinephrine and dopamine

d) Serotonin and dopamine

Answer: c) Norepinephrine and dopamine

6. Bupropion, a commonly prescribed antidepressant, is primarily known for its action on which neurotransmitter?

a) Serotonin

b) Norepinephrine

c) Dopamine

d) GABA

Answer: c) Dopamine

7. Which antidepressant class carries a risk of potentially fatal serotonin syndrome when combined with certain medications?

a) SSRIs

b) TCAs

c) MAOIs

d) Atypical antidepressants

Answer: a) SSRIs

8. Which of the following is an atypical antidepressant that inhibits both serotonin and norepinephrine reuptake?

a) Mirtazapine

b) Duloxetine

c) Trazodone

d) Moclobemide

Answer: b) Duloxetine

9. Which antidepressant class is typically considered the first-line treatment for depression due to their favorable side effect profile?

a) SSRIs

b) TCAs

c) MAOIs

d) Atypical antidepressants

Answer: a) SSRIs

10. Which neurotransmitter is targeted by drugs that block the enzyme monoamine oxidase?

a) Serotonin

b) Dopamine

c) Norepinephrine

d) All of the above

Answer: d) All of the above

11. Which antidepressant class is commonly associated with sexual dysfunction as a side effect?

a) SSRIs

b) TCAs

c) MAOIs

d) Atypical antidepressants

Answer: a) SSRIs

12. Which of the following is a potential side effect of tricyclic antidepressants (TCAs)?

a) Weight gain

b) Insomnia

c) Orthostatic hypotension

d) Anxiety

Answer: c) Orthostatic hypotension

13. Which antidepressant class requires dietary restrictions due to the risk of hypertensive crisis?

a) SSRIs

b) TCAs

c) MAOIs

d) Atypical antidepressants

Answer: c) MAOIs

14. Venlafaxine is classified as which type of antidepressant?

a) SSRI

b) TCA

c) SNRI

d) MAOI

Answer: c) SNRI

15. Which of the following is a common side effect of bupropion?

a) Weight gain

b) Sedation

c) Increased appetite

d) Seizures

Answer: d) Seizures

16. Which antidepressant is sometimes used off-label for smoking cessation?

- a) Amitriptyline
- b) Paroxetine
- c) Bupropion
- d) Phenelzine

Answer: c) Bupropion

17. Which neurotransmitter is thought to be involved in the pathophysiology of depression and targeted by most antidepressants?

- a) Glutamate
- b) Dopamine
- c) Serotonin
- d) Acetylcholine

Answer: c) Serotonin

18. Which antidepressant is commonly used in the treatment of anxiety disorders?

- a) Fluoxetine
- b) Amitriptyline
- c) Venlafaxine
- d) Paroxetine

Answer: d) Paroxetine

19. Which antidepressant class has a potential risk of causing hypertensive crisis when combined with foods containing tyramine?

- a) SSRIs
- b) TCAs
- c) MAOIs
- d) Atypical antidepressants

Answer: c) MAOIs

20. Which antidepressant is known for its sedative properties and is sometimes used off-label for insomnia?

- a) Venlafaxine
- b) Trazodone
- c) Bupropion
- d) Fluoxetine

Answer: b) Trazodone

21. Which neurotransmitter system is primarily targeted by SSRIs?

- a) GABAergic system
- b) Cholinergic system
- c) Serotonergic system
- d) Adrenergic system

Answer: c) Serotonergic system

22. Which antidepressant class is most commonly associated with weight gain as a side effect?

- a) SSRIs
- b) TCAs
- c) MAOIs
- d) Atypical antidepressants

Answer: b) TCAs

23. Which atypical antidepressant is often used as an adjunctive therapy for depression in individuals with insomnia?

- a) Mirtazapine
- b) Duloxetine
- c) Trazodone
- d) Bupropion

Answer: a) Mirtazapine

24. Which of the following is a potential side effect of SSRIs in pediatric patients?

- a) Growth suppression
- b) Hyperactivity
- c) Hypoglycemia
- d) Osteoporosis

Answer: a) Growth suppression

25. Which antidepressant class is least likely to cause sexual dysfunction as a side effect?

- a) SSRIs
- b) TCAs
- c) MAOIs
- d) Atypical antidepressants

Answer: d) Atypical antidepressants