

CNS-Pharmacology

Archive

Lecture 1

General Anesthesia

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 1**

1. Which of the following is wrong about anesthesia?

A patient may experience delirium and violent behavior in stage III of anesthesia

2. Regarding ketamine: Which one of the following is false? Select one:

- a. It produces analgesia with hypnosis; however, the eyes remain open.
- b. It is derived from phencyclidine and block NMDA glutamate receptors
- c. It increases blood pressure as well as intracranial and intraocular pressures
- d. It may produce delirium and hallucinations on recovery
- e. It increases respiratory rate and lowers PaCO₂.

Answer: e

3. Anesthetic drug which has a good analgesic effect + act as a strong bronchodilator?

Answer : Ketamine

4. Which of the following anesthetic drugs cause hepatic toxicity?

Answer : Halothane

5. General anesthesia MOA?

- a. Direct act at GABA-A
- b. Potentiate GABA in GABA-A with no direct effect on NMDA receptor
- c. Activation of nicotine on K⁺ currents
- d. Increase chloride efflux

Answer: a

6. Which of the following drugs is contraindicated in a stroke case?

- a. Ketamine
- b. Halothane
- c. Desflurane

Answer: a

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Halothane and sevoflurane inhalation anesthetics: Which one of the following is false?

- a. Sevoflurane is chemically unstable; it decomposes on contact with lime water.
- b. Sevoflurane produce faster induction of anaesthesia than halothane.
- c. Sevoflurane has pleasant smell, and produces less respiratory depression
- d. Halothane causes higher incidence of ventricular arrhythmia.
- e. Metabolism of sevoflurane in liver produces large amount of fluoride radicals.

Something false about halothane?

Potent anesthetic and strong analgesic

Which of the following is not true about anesthetics?

Opioids cause hypertension and respiratory depression

The following side effects may be observed with halothane except? Select one:

- a. Hypotension.
- b. Jaundice
- c. Diffusion anoxia
- d. Ventricular premature contractions.
- e. Hypercapnia

Answer: e

Which one of the following is false about isoflurane?

- a. It has a pleasant smell.
- b. It has lower blood solubility than halothane
- c. It lowers blood pressure due to lowering of total peripheral resistance.
- d. It can be used with CO₂ absorption system (lime water) in the semiclosed method
- e. It depresses respiration insignificantly

Ans:(d)

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Archive

Lecture 2

Sedative hypnotics (1) Benzodiazepines and related drugs

Corrected By :

X

CNS-Pharmacology **Lecture 2**

1. False about adverse effect of benzodiazepines?

- a. Decrease reaction time
- b. Motor incoordination
- c. Confusion
- d Fatigue
- e. amnesia

Answer: A

2. Which of the following is not used as a hypnotic?

- A. Amphetamine
- B. Zolpidem
- C. Zaleplon
- d. Eszopiclone

Answer: A

3. Which of the following is incorrect about benzodiazepines?

- a. Safe to use with alcohol
- b. Motor incoordination
- c. Confusion
- d Fatigue
- e. amnesia

Answer: A

4. All are false according to sedative hypnotics EXCEPT :

- a. Phenobarbital long acting on Cl channels
- b. Lorazepam activate GABA A directly

Answer: B

CNS-Pharmacology **Lecture 2**

5. Which one of the following is false about benzodiazepines?

- a. They increase entry of chloride ions into neurons acted upon by GABA.
- b. They can cause skeletal muscle 1 relaxation.
- c. They can cause psychomotor slowing.
- d. They can reduce delusions and hallucinations in psychotic patients.
- e. Use of large doses can induce sleep and cause anterograde amnesia.

Answer: D

6. The following may be adverse effects of therapeutic doses of BDZs except?

- a. Impaired cognition and judgement.
- b. Hangover.
- c. Respiratory depression.
- d. Enhancement of CNS depressant action of 1 ethanol.
- e. Disinhibition.

Answer: C

7. Zolpidem: Which one of the following is false?

- a. It has low incidence of dependence.
- b. It is not helpful for jet-lag insomnia.
- c. It does not bind to BDZ receptors when the GABA-A receptor contains alpha2-subunits.
- d. It has skeletal muscle relaxing and anticonvulsant action.
- e. It is a hypnotic that does not produce hangover or rebound insomnia after sleep.

Answer: D

8. The following have active hepatic metabolite except?

- a. Alprazolam.
- b. Lorazepam.
- c. Diazepam.
- d. Chlordiazepoxide.
- e. Flurazepam

Answer: B

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9. All of the following is true about flumazenil except: Answer:
Patients with suspected benzodiazepine overdose should respond adequately to a cumulative dose of 1-50 mg given over 2-10 minutes

10. One of the following is INCORRECT?
Zolpidem use in acute anticonvulsant

11. Patient taking 2 tablets from lorazepam, doctor says he is in toxicity state, what appropriate action?

- A) Gastric lavage
- B) IV Flumazenil
- C) IV sodium bicarbonate

Answer: B



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Lecture 3

X

Corrected By :

X

CNS-Pharmacology **Lecture 3**

1. Buspirone is ?

- a. Anxiolytic drug
- b. causing marked sedative
- c. causing euphoric effects
- d. causing hypnotic
- e. all are true

Ans :(a)

2. Hypnotic drug which has long term management ?

Answer : Phenobarbital

2. False about adverse effect of benzodiazepines ?

- a. Decrease reaction time
- b. Motor incoordination
- c. Confusion
- d. Fatigue
- e. amnesia

ans :(a)

3. GABA main function ?

- 1) main inhibitory *
- 2) main excitatory

4. All the following is incorrect about buspirone except

Answer: The drug is used in generalized anxiety states but is less effective in panic disorders

5. all are antidepressants except

- A) Selective serotonin re-uptake inhibitors (SSRIs)
- B) Atypical antidepressants
- c) serotonin / norepinephrine re-uptake inhibitors (SNRIS)
- D) glutamate excitation
- e) Monoamine oxidase inhibitors (MAOs)

ans:(d)

6. All are false according to sedative hypnotics EXCEPT

- A. Phenobarbital long acting on Cl channels
- B. Lorazepam activate GABA directly

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Lecture 4

Antiepileptic Drugs

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 4**

1. The following adverse effects match except?

- a. Phenytoin: Hypertrophy of the gums.
- b. Carbamazepine: worsening of petit mal and myoclonic epilepsy.
- c. Vigabatrin: constriction of visual field.
- d. Topiramate: myopia and glaucoma
- e. Sodium valproate: impaired cognition in children

Answer: d

2. Regarding diazepam : Which one of the following is true?

It is effective for stopping convulsions of status epilepticus

3. The followings are useful for treatment epilepsy except?

- a. Clonazepam.
- b. Valproate.
- c. Pregabalin.
- d. Gabapentin
- e. Oxycodone

Answer: e

4. All are Mechanisms of action of antiepileptic drugs except?

- a. Block sodium channels
- b. Block calcium channels
- c. Enhance inhibitory GABAergic impulse
- d. Interference with glutamate
- e. Selective serotonin reuptake inhibitor

Answer: e

5. Which of the following is a Ca channel blocker?

- a. Valproic acid
- b. carbamazepine
- c. benzodiazepines
- d. Tiagabine

Answer: a

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6. Which of the following isn't a Na channel blocker?

- a. Phenytoin
- b. Valproic acid
- c. lamotrigine
- d. benzodiazepines

Answer: d

7. Valproic acid mechanisms ?

- A) Inhibition of GABA transaminase
- B) prolong Na⁺ channels activation
- C) activation of Ca⁺ channels

Answer: a

8. Which of the following is false about anti-epileptic drugs? Select one:

- a. Carbamazepine blocks voltage dependent sodium channels in the inactivated state.
- b. Vigabatrin and valproate increase brain GABA level by inhibiting its catabolism.
- c. Levetiracetam blocks NMDA glutamate receptors.
- d. Ethosuximide blocks T-type calcium channels in thalamic neurons.
- e. Topiramate enhances endogenous GABA activity after binding to GABA-A receptors.

Answer: c

9. The following are adverse effects of sodium valproate when used in epilepsy except?

- a. Impaired cognition.
- b. Hepatitis.
- c. Alopecia.
- d. Increase in weight
- e. Increased blood level of lamotrigine.

Answer: e

10. The following are useful for classical petit mal (**Absence seizures**) epilepsy except?

- a. Clonazepam.
- b. Valproate.
- c. Ethosuximide.
- d. Levetiracetam.
- e. Tiagabine.

Answer: e

CNS-Pharmacology **Lecture 4**

11. Carbamazepine: Which one of the following is false?

- a. It induces hepatic microsomal enzymes which shortens its own half-life
- b. It is useful for chronic control of both grand mal and partial epilepsy.
- c. It is first choice drug for treatment of trigeminal neuralgia in adults.
- d. It can cause dizziness and diplopia as side effects at beginning of its use.
- e. It inhibits repetitive neuronal firing by increasing brain GABA level.

Answer: e

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The following may be useful in treatment of **myoclonic epilepsy** except?

- a. Clonazepam.
- b. Oxcarbazepine
- c. Lamotrigine.
- d. Topiramate

Answer: b



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Lecture 5

Anti-Parkinson Drugs

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 5**

1. Which of the following drugs isn't a dopamine receptor agonist?

- A) Selegiline
- B) Bromocriptine
- C) Apomorphine
- D) Pramipexole

Answer: a

2. All the following are true about Levodopa except?

- a. Levodopa is a metabolic precursor of dopamine
- b. Levodopa causes motor control fluctuations
- c. Levodopa crosses the blood-brain barrier
- d. It is carboxylated to dopamine in the periphery
- e. It causes nausea, vomiting, cardiac arrhythmias, and hypotension

Answer: d

3. Which of the following is not used for Parkinson?

- a. Levodopa
- b. Dopamine agonists
- c. Dopamine antagonists
- d. Rasagiline

Answer: c

4. All of the following is an anti-Parkinson drug except :

- a. Levodopa
- b. Amantadine
- c. Bromocriptine
- d. Serotonin
- e. tolcapone

Answer: d

5. Which of the following drugs is a Monoamine Oxidase Inhibitor?

- a. Citalopram
- b. selegiline
- c. Amitriptyline
- d. Doxepin

Answer: b

CNS-Pharmacology **Lecture 5**

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All the following are true except? Select one:

- a. Carbidopa increases the availability of levodopa to the CNS
- b. Concomitant administration of levodopa and monoamine reductase (MAO) inhibitors
- c. Selegiline decreases metabolism of dopamine and increases dopamine levels in brain
- d. Catechol-O-methyltransferase metabolizes levodopa to 3-O-methyldopa
- e. Rotigotine activates the dopamine receptors to in patients with advanced Parkinson's disease complicated by motor fluctuations and dyskinesias

Ans:(e)

One of the following is catechol O methyltransferase inhibitor?

- a. Entacapone
- b. Selegiline
- c. Bromocriptine
- d. Rotigotine
- e. Apomorphine

Ans:(a)

All the following are true except?

- a. Benztropine, trihexyphenidyl, procyclidine and biperiden are antimuscarinic agents
- b. Amantadine has several effects including Inhibiting N-methyl-D-aspartate type of glutamate receptors
- c. Rotigotine has duration of action longer than that of levodopa and therefore less effective in patients exhibiting fluctuations in their response to levodopa
- d. Antimuscarinic agents interfere with gastrointestinal peristalsis and are contraindicated in patients with glaucoma, prostatic hyperplasia, or pyloric stenosis.
- e. Stalevo is an excellent combination of drugs for the management of Parkinson disease

All the following are true except? Select one:

- a. Haloperidol and pramipexole antagonize the dopamine receptors and causes secondary parkinsonism
- b. Levodopa is a metabolic precursor of dopamine restoring dopaminergic system by enhancing synthesis of dopamine
- c. levodopa is actively transported into CNS and is converted to dopamine in brain
- d. Carbidopa diminishes metabolism of levodopa in gastrointestinal tract and peripheral tissues; thus, it increases availability of levodopa to CNS
- e. Levodopa has short half-life causing fluctuations in plasma concentration and may produce — fluctuations in motor response

Ans:(c)

Ans:(a)

5.Which one is Catechol-O-methyltransferase inhibitor?

Tolcapone

CNS-Pharmacology **Lecture 5**

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One of the following is catechol O methyltransferase inhibitor?

- Entacapone **
- Seligiline
- Bromocriptine
- Rotigotine
- Apomorphine

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- Amantadine has several effects including Inhibiting N-methyl-D-aspartate type of glutamate receptors
- Rotigotine has duration of action longer than that of levodopa and therefore less effective in patients exhibiting fluctuations in their response to levodopa
- Antimuscarinic agents interfere with gastrointestinal peristalsis and are contraindicated in patients with glaucoma, prostatic hyperplasia, or pyloric stenosis
- Stalevo is an excellent combination of drugs for the management of Parkinson disease

Answer: c



الطبيب الجراحة
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Lecture 6

Antidepressant Drugs

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 6**

1. Which of the following is not an anti-depressant?

- a. Selective serotonin reuptake inhibitors
- b. Serotonin norepinephrine reuptake inhibitor
- c. Atypical antidepressants
- d. Excitatory glutamate inhibitor
- e. MAO inhibitors

Answer: d

2. Which of the following is not an SSRI?

- a. Fluoxetine
- b. Citalopram
- c. Duloxetine
- d. Sertraline

Answer: c

3. One of the following matches is WRONG? Select one:

- a. SSRIs: Escitalopram
- b. SNRIs: Venlafaxine
- c. Atypical antidepressants: Phenezine
- d. Tricyclic antidepressants: Amitriptyline
- e. MAO inhibitors: Selegiline

Answer: c

4. All following about antidepressants are TRUE EXCEPT?

- a. SSRIs have replaced the use of TCAs and MAO inhibitors
- b. SNRIs effective in treatment of neuropathic pain
- c. Imipramine is useful in treatment of bed-wetting in children
- d. MAO inhibitors use is limited because of complicated dietary restrictions
- e. MAO inhibitors and SSRIs can be co-administered together

Answer: e

5. All following about antidepressants are TRUE EXCEPT?

- a. All antidepressants carry a risk of suicidal thoughts in teenagers
- b. SNRIs have no activity at muscarinic and histaminic receptors
- c. Tricyclic antidepressants block alpha-adrenergic, histamine and muscarinic receptors
- d. MAO inhibitors adverse effects: orthostatic hypotension and dry mouth
- e. Serotonin syndrome manifestations: muscle rigidity and confusion

Answer: a

CNS-Pharmacology **Lecture 6**

6. Selective serotonin reuptake inhibitors, one is FALSE?

- a. Have little blocking activity at muscarinic, alpha-adrenergic, and histaminic receptors
- b. Safe in overdose
- c. Half-life 16-36 hours
- d. It takes 4 weeks to produce significant improvement in mood
- e. Adverse effects: delayed ejaculation

Answer: d

7. Which of the following is an SNRI?

- a. Fluoxetine
- b. Amitriptyline
- c. Venlafaxine
- d. Bupropion

Answer: c

8. A 36 year old patient smokes 2 packs of cigarettes a day, he tried to stop smoking by using nicotine patches but he was unsuccessful, what medication would be beneficial in this case ?

- a. Phenezine
- b. Bupropion
- c. Imipramine
- d. Buspirone
- e. Citalopram

Answer: b

9. One of the following is a norepinephrine & serotonin reuptake inhibitor

- a. citalopram
- b. Venlafaxin
- c. Fluvoxamine
- d. Sertraline

Answer: b

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Lecture 7

Migraine & Neuropathic
Pain Treatment

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 7**

1. Which drug is commonly used to treat herpetic neuralgia and diabetic neuropathy?

- A) Carbamazepine
- B) Phenytoin
- C) Valproate
- D) Gabapentin

Answer: d



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Lecture 8

Opioids

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 8**

1. All the following about naloxone and naltrexone are true EXCEPT?

- a. Naloxone is pure competitive antagonist.
- b. Naloxone given IV in opioid overdose toxicity.
- c. Naltrexone has a shorter duration of action than naloxone.
- d. Naltrexone can be used orally

Answer: c

2. Which of the following effects of opioids does not develop tolerance?

- a. Sedation
- b. Analgesia
- c. Euphoria
- d. Constipation

Answer: d

3. If you experience a bout of diarrhea on your way to work, which drug is recommended to buy from a drugstore?

- a. Loperamide
- b. Bismuth subsalicylate
- c. Naloxone
- d. Attapulgit

Answer: a

4. Which of the following is not true about anesthetics?

- a. General anesthetics induce loss of consciousness
- b. Local anesthetics block sodium channels
- c. Opioids cause hypertension and respiratory depression
- d. Inhaled anesthetics can cause hypotension

Answer: c

5. Which of the following is not an effect of morphine?

- a. Diarrhea
- b. Analgesia
- c. Euphoria

Answer: a

CNS-Pharmacology **Lecture 8**

6. Which of the following is false about fentanyl?

- a) It's less potent than morphine
- b) It is used for managing severe pain
- c) It can cause respiratory depression
- d) It is available in patch form for extended release

Answer: a

7. All of the following are treatment of acute morphine poisoning except?

- a. IV fluids
- b. Naloxone
- c. Gastric lavage
- d. Artificial respiration
- e. Histamine

Answer: e



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Lecture 9

Pharmacology of
Schizophrenia

Collected By :

Mohammad Mousa

CNS-Pharmacology **Lecture 9**

1. Which class of drugs is primarily used to treat schizophrenia and psychotic disorders?

- a. Direct dopamine receptor antagonists
- b. Serotonin selective re-uptake inhibitors
- c. Monoamine oxidase inhibitors
- d. Tricyclic antidepressants

Answer: a

2. A patient suffers from hallucinations, delusions, and becomes quiet and isolated. Haloperidol is given to improve which symptom?

- a. Depression
- b. Negative symptoms
- c. Delusions

Answer: c

3. A patient with schizophrenia is taking Clozapine. Which adverse effect should be monitored with caution?

- a. Agranulocytosis
- b. Extrapyrimalidal symptoms
- c. Sedation

Answer: a

4. Which of the following is not true about neuroleptics?

- a. Olanzapine may improve cognitive function
- b. A typical neuroleptic has few extrapyramidal side effects
- c. Neuroleptics are used to treat psychosis
- d. Atypical neuroleptics have a lower risk of causing extrapyramidal symptoms

Answer: b

5. Which of the following is false about antipsychotics?

- a. Can cause Sexual dysfunction
- b. IV Benztropine is used to treat EPS
- c. Atypical antipsychotics are better in treating negative symptoms
- d. Clozapine is the first line of treatment

Answer: d

CNS-Pharmacology **Lecture 9**

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All the following are types of schizophrenia EXCEPT?

- a. Catatonic type.
- b. Residual type.
- c. Disorganized type.
- d. Multiple personalities type. *****
- e. Paranoid type.

Regarding olanzapine, all the following are facts EXCEPT?

- a. It is the antipsychotic number one in sales.
- b. It is good for controlling mood symptoms.
- c. It exhibits multi receptor action.
- d. Side effects: weight loss and agitation. *****
- e. It is available in wafer form

Which of the following matched pairs are NOT TRUE?

- a. Mania and depression- Imbalance Ach
- b. Papez circuit- Establishing the emotional significance of memory for the purpose of life
- c. Damage Papez circuit- Alzheimer's disease
- d. Fornix- Major output tract of the hippocampus in Papez circuit
- e. Schizophrenia- Caused by decreased dopamine *****