



MEDICINE
KING SAUD UNIVERSITY



MCQs

SAQs

summary

Drugs used in anxiety and panic disorder

قادة فريق علم الأدوية :

لين التميمي & عبدالرحمن ذكري

الشكر موصول لأعضاء الفريق المتميزين :

غادة المزروع

جومانا القحطاني

روان سعد القحطاني



pharma436@outlook.com



@pharma436



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Summary

Treatment of anxiety

-Initial therapy: **Psychotherapy** ,Then drug: **Anxiolytics**

Benzodiazepines	5HT1A agonists Buspirone	SSRIs Fluoxetine	Tricyclic Antidepressants	Beta Blockers
<p>-M.O.A: CNS Depression: enhance GABA > cl channels opening > more hyperpolarization > difficult to depolarizes</p> <p>Uses: -Anxiety (All types) -Insomnia (Hypnotic) -epilepsy -anesthesia</p>	<p><u>only anxiolytic (mild) (not effective in panic attack)</u></p> <p>-No hypnotic effect. -No muscle relaxant effect. -No anticonvulsant action. -No alcohol additive effect. -Doesn't impair memory and coordination -not affect driving skills.</p>	<p>-First line of treatment for anxiety. (all types)</p> <p>(also is used as anti-depressant drug)</p>	<p>Doxepin , Imipramine , Desipramine</p> <p>-anxiety associated with depression & (panic attacks)</p>	<p>Propranolol , Atenolol</p> <p>-Reduce somatic symptoms of anxiety > Used in performance or social anxiety. (phobia)</p>
<p>ADR: -Cognitive impairment. -Ataxia -Hangover -Anterograde amnesia.</p>	<p>So we can use it with:</p> <ul style="list-style-type: none"> • <u>Alcoholism</u> • <u>Elderly patients</u> • <u>Drivers</u> 	<p>ADRs: -Atropine like actions -Sexual dysfunction</p>		<p>ADR: Hypotension.</p>
<p><u>fast acting</u></p>	<p>-Delayed onset of action</p>			<p>-</p>
<p>-Tolerance and dependence. -Risk of withdrawal symptoms (Rebound insomnia, anxiety & convulsion) - If we use Flumazenil will precipitate that.</p>	<p>-No withdrawal symptoms</p> <p>-Minimal risk of dependence</p>	<p>- They are :</p> <ol style="list-style-type: none"> 1- well tolerated 2- low risk for dependency and abuse 3- low potential for overdose 	<p>-</p>	<p>-</p>
<p># or precaution: -Pregnant women or breast-feeding > Lipophilic > cross placental barrier (Fetal depression) , excreted in milk (neonatal depression) -liver disease > metabolized in liver -old people > supper sensitive CNS</p>		<p>-</p>	<p>-</p>	<p># or precaution: asthma, cardiac failure</p>

Summary

Drug interactions		Benzodiazepines	
BDZ+ CNS depressants (<u>alcohol</u> & antihistamin)	<u>↑ effect of benzodiazepines</u> <u>"Additive effect"</u>	Diazepam	-Pre-anesthetic <u>-Alcohol withdrawal syndrome</u> -epilepsy (anticonvulsant) -skeletal muscle relaxing
BDZ + CYT P450 inhibitors (cimetidine & erythromycin)	↑ t1/2 of benzodiazepines		Lorazepam.
BDZ + CYT P450 inducers (phenytoin & rifampicin)	↓ t1/2 of benzodiazepines	Triazolam, Flurazepam	
Buspirone + CYT P450 inhibitors (verapamil, diltiazem)	↑ buspirone level.		Midazolam
Buspirone + CYT P450 inducers (Rifampin)	↓ buspirone level.	Alprazolam	Used as antidepressant & antianxiety

- ❖ With driver or workers in factory to avoid the hangover
 - Is recommend to give Buspirone & short/intermediate acting of Benzodiazepines.
 - We can not use long action of Benzodiazepines
- ❖ In elderly Patients we prefer to use :
 - Lorazepam → go directly to phase2 (so dos not affect by the age)
 - Buspirone → Does not impair the memory and coordination.
- ❖ The dependence :
 - Minimal risk → Buspirone & Fluoxetine.
 - High risk → Benzodiazepines.
- ❖ Additive effect any CNS depressants such as alcohol or Antihistaminic:
 - Benzodiazepines & Flumazenil have the effect.
 - Buspirone does not have this effect (so safe to be used with alcoholism)
- ❖ Why the SSRIs such as Fluoxetine is considered as the 1st line of treatment?
 - well tolerated.
 - low risk for dependency and abuse.
 - low potential for overdose.
- ❖ Benzodiazepines has fast acting, while the other have delayed acting.
- ❖ Flumazenil is the antidote of Benzodiazepines, and may precipitate their withdrawal symptoms.
- ❖ Used as antidepressant & antianxiety (Alprazolam / TCA / SSRIs)

MCQs

1- A truck driver visited the doctor complaining of numerous panic attacks. What drug would you recommend for him?

- A- Atenolol B- Diazepam C- Buspirone

2- A truck driver visited the doctor complaining of numerous panic attacks. What is the drug which should not be given to him to avoid the hangover ?

- A- Lorazepam B- Diazepam C- Buspirone

3- 45 year old female visited the psychiatrist complaining of constant and severe anxiety. What is your first drug of choice?

- A- Fluoxetine B- Diazepam C- Buspirone

4- 33 year old man visited you complaining of excessive worrying, lack self-confidence and a constant feeling of sadness. What would you recommend for him?

- A- Alprazolam B- Imipramine C- Both of them

5- 32 year old female with history of asthma, visited the psychiatrist complaining of irrational fear and an uncontrolled hand tremor and palpitation when giving presentation or interacting with people. What do you recommend for her?

- A- Propranolol B- Atenolol C- fluoxetine

6- Which agent is best used in the Emergency Room setting for patients who are believed to have received too much of a benzodiazepine drug or taken an overdose of benzodiazepines?

- A- Buspirone B- Flumazenil C- Fluoxetine

7- which one of the following Benzodiazepines can be used as drug of choice in elderly patients due to its direct metabolism by glucuronide conjugation ?

- A- Diazepam B- Alprazolam C- Lorazepam

8- Which of the following agents has a rapid anxiolytic effect and would be best for the acute management of anxiety?

- A- Fluoxetine B- Lorazepam C- Buspirone

Note regarding question No.4

“ we can't give non-selective beta blocker (Propranolol) in case of asthma so we give atenolol (selective)”

Answers
1) C
2) B
3) A
4) C
5) B
6) B
7) C
8) B

MCQs

9- Which one of the following is a short-acting hypnotic and better for sleep induction compared to sleep maintenance?

- A- Temazepam. B- Flurazepam. C- Triazolam

10- Which one of the following Benzodiazepines can be used as antiepileptic drugs with I.V route ?

- A- Triazolam B- Diazepam C- Buspirone

11- Which one of the following Benzodiazepines should not be used as hypnotic drug with driver who has to work next day?

- A- Lorazepam. B- Flurazepam. C- Triazolam

12- Which one of the following Benzodiazepines can be used safely as hypnotic drug with driver who has to work next day?

- A- Lorazepam. B- Flurazepam. C- Triazolam

13- A 45-year-old man who has alcohol-related seizures. His wife confirms that he has been drinking heavily for 3 weeks. What treatment should be provided to the patient if he goes into withdrawal?

- A- Fluoxetine B- Diazepam C- Flumazenil

14- Which one of the following Benzodiazepines can be used to relieve the patient's anxiety before the surgery ?

- A- Midazolam B- Diazepam C- Lorazepam

15- Which one of the following Benzodiazepines can be used as anesthetic during the surgery ?

- A- Midazolam B- Diazepam C- Lorazepam

16- Patient whose addicted to sleeping pills and suddenly you stop him to take them, which one of the following drugs should not be given to him to avoid the sever depression of CNS ?

- A- Diazepam B- Flumazenil C- Both of them

Answers
9) C
10) B
11) B
12) A
13) B
14) B
15) A
16) C

MCQs

17- Which one of the following agents for the management the anxiety and may have a risk for addiction or dependence? :

A- Lorazepam.

B-Fluoxetine.

C- Buspirone

18- All of the following agents may cause cognitive impairment in elderly patients , including memory problems when used at recommended doses except?

A- Triazolam

B- Diazepam

C- Buspirone

19- Which one of the following Antianxiety drugs is not effective in panic attacks?

A- Fluoxetine.

B- Flurazepam.

C- Buspirone

20- If we have patient who is addicted to alcohol, and he has diagnosed with generalized anxiety disorder, which one of the anxiolytic drug is safe to used ?

A- Diazepam.

B- Flurazepam.

C- Buspirone.

20- Which one of the following statements is not correct regarding benzodiazepines?

A- They directly open chloride channels.

B- They show analgesic actions.

C- They safe drugs with a high therapeutic index.

D- They show psychological & physical dependence.

E- Their Clinical improvement of anxiety requires 2 to 4 weeks of treatment.

Answers
17) A
18) C
19) C
20) C
21) E

SAQs

Q1) 22 year old man visited the doctor complaining of problems when interacting with people and not being able to form friendships.

1- what drug and class would you recommend for him?

- Propranolol > non-selective beta blocker. - Atenolol > selective beta blocker.

2- what is its mechanism of action?

It reduces somatic symptoms by blocking peripheral sympathetic system.

3- give two contraindications of this drug.

Asthma , cardiac failure , peripheral vascular disease.

Q2) A 45-year-old man who has been injured in a car accident is brought into the emergency room. His blood alcohol level on admission was high. Hospital records show a prior hospitalization for alcohol-related seizures. His wife confirms that he has been drinking heavily for 3 weeks.

1- What treatment should be provided to the patient if he goes into withdrawal?

Diazepam

2- How can we administrated to him in our case ?

I.V

3- What is its mechanism of action.

It reduces neural excitability by binding to BZ receptor in the brain which will enhance GABA's action which will lead to an increase of the chloride influx causing Hyperpolarization.

4- List some clinical uses of this drug?

As skeletal muscle relaxant / As antiepileptic drug / Pre-anesthetic medication

5- Is there any risk of cardiovascular & respiratory depression in his case?

Yes if we combine two or more CNS depressants such as alcohol & Diazepam(in a large dose), we will have additive effect which may lead to cardiovascular & respiratory depression.

In the other hand the Buspiron does not have any additive effect with alcohol.

6- If he try to stop this drug suddenly due to its side effects, is there any drug should not be used in this case?

Flumazenil (which is benzodiazepine antagonist), because it may precipitate the withdrawal symptoms when we stop the benzodiazepines such as Diazepam suddenly.