

P#1

Name :- Sebgat ullah

ID :- 14636

Subject :- General pharmacology

Instructor :- Nadra

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Q No 1:

Drug receptors :-

Receptor is the macromolecule in the membrane or inside the cell that specially chemically binds a ligand drugs. The binding of drugs to the receptor depends on types of chemical bonds that can be established b/w drugs and receptor.

Receptor families :-

There are four major receptor families

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- 1) :- Ligand-gated ion channel :-
It is responsible for the flow of ions across the cell membrane. It is due to the binding of ligand to the channel.
⇒ its response very fast (ms)
e.g. Nicotinic receptor, etc.
- 2) :- G-protein coupled receptors :-
They having single peptide which having seven membrane-spanning region.
⇒ They having three subunit which is α , β , GDP.
- 3) :- Enzyme-linked receptor :-
The inhibition of the cytosolic enzyme activities due to the binding of ligand to the an extracellular domains.

(P.T.O)

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The duration of response is from minutes to hours

e.g. epidermal growth factor etc

4) Intracellular receptors:

They have sufficient lipid solubility which is able to move across the target cell membrane and

this places constraint on the physical & chemical properties of the ligand.

e.g. albumin, steroid hormones effects on the second messenger:

The G-protein coupled receptors shows effect on the second messenger

P#4 .

Q No 21.

* Drug interactions ~

A clinically meaningful interaction in the effects of one drug as a result of coadministration of another.

The drug effected by interaction called object drug

The drug causing interaction called precipitant drug

* Interaction may be desirable or undesirable.

Types of drug interaction:-

i ⇒ drug-drug interaction.

ii ⇒ drug-food interaction.

iii ⇒ drug-disease interaction.

(P.T.O)

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* ~~(Pheto)~~ pharmacokinetic drug :-

Modification in the effect of a drug are caused by the d/f absorption, transport, distribution, metabolism or excretion of one or both of drugs compared with the expected behavior of each drug when taken individually

* factors :-

i) Absorption. G.I motility, PH etc

ii) Distribution :- transport proteins, plasma protein binding etc.

iii) Metabolism :- phase I (CYP450)
Phase II (conjugation)

iv) Elimination :- Renal.

III ★ #

III ★

P#6 :-

Q No 3 :-

General anesthesia :-

- a drugs that bring reversible loss of consciousness
- # It is used for to facilitate surgery.
 - # It is mainly Inhalation or intravenous.

* Local anesthesia :-

- They are used to abolish pain sensation in restricted area in the body
- # The site of action is cell membrane.
 - # They block the conduction of the sodium ions channel.
 - # They produce physical block like cork on bottle.

(P.T.O)

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* Stages of anaesthesia :-

There are main

four stages.

* Stage 1 :- Analgesia :-

In the first stage
the by the sometime of
amnesia awareness of pain will
be decrease

* Stage 2 :- Surgical anaesthesia :-

The blood pressure
will be maintain & respiration
will be regular and the
patient will be relax &
will don't feel pain.

* Stage 3 :- excitement :-

before the surgical anaesthesia
the patient have irregular respi-
-ration & feel very excitement

* Stage 4 :- Medullary depression.

The patient

11/11 (P.T.O)

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requiered mechanical &
pharmalogical support that
needs b/c they have
sever respiratory & cardiovas-
-cular depression.

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Q No 41.

Heart failure means.

Heart failure means
that the heart is not able
to pump blood arround the
body properly, it usually
occurs b/c the heart
has becomes weak or stiff
and sometimes also called
conjestive heart failure

(P.T.O)

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Pathophysiology:

in heart failure
The heart may not provide
tissues with adequate blood for
metabolic needs and cardiac
related elevation of pulmonary
or systemic venous pressures
many result in organ
congestion. This condition can
result from abnormalities of
systolic or diastolic function
or commonly both

* B Classification of Drugs used in CHF

Inotropic drugs:

(A) Cardiac glycosides:
Digoxin, Digoxin, Ouabain
Sympathomimetics.

= Dobutamine Dopamine.

P.T.O

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① Phosphodiesterase

III inhibitors: Amrinone

② Diuretics

Ⓐ High ceiling diuretics:
Furosemide, Bumetanide

Ⓑ Thiazide like diuretics:
Hydrochlorothiazide, Metolazone, xipamide

③ Aldosterone antagonist:

Spirolactone, Eplerenone.

ONOs

i. Narrow - Spectrum.

* antibiotics act against a limited group of bacteria

* against a limited group of bacteria.

* active on a small number of bacterial

* Targetted treatment of documented infections

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Broad Spectrum:
antibiotics act on a larger group of bacteria.

① Active on a large number of bacterial species.
② Empirical treatment of non documented infections.

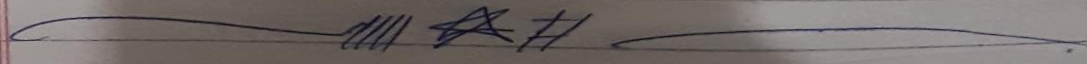
③ Antibiotics act against a larger group of bacteria.

★ Classification of Antibiotics

- ★ (i) Based on mode of Action
 - (1) Bacteriostatic.
 - (2) Bactericidal.

★ (ii) Based on their Spectrum of action.

- (1) Broad Spectrum
- (2) narrow Spectrum.



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QNO 5 = B

* Antiviral agents so.

A virus is one of the smallest microorganisms, consisting of only a nucleic acid core that is surrounded by a protein shell.

* Targets include.

- ⇒ viral penetration
- ⇒ uncoating
- ⇒ nucleoside analogue
- ⇒ Non-nucleoside polymerase inhibitors
- ⇒ neuraminidase inhibitors.

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The end

