

PHARMACOLOGY

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Definitions & Terminology

(U)

Drug = Medicine

- Drogue = French word
- WHO = any = substance, or =
= mixture of substances or =
preparation or =
device = "pharmaceuticals" } drug pharmacopeia
- use = Prevention or = } in s. human or =
treatment or = } . animal
diagnosis or = } for: external } use
cure } . internal }

= General definition:

a chemical agent or device that alters biological processes in living tissues.

ligand: - any chemical that binds to another; (2)
- in pharmacology = drugs that binds to receptors.

Analogue drug:

= Drug chemically related to parent drug.

= Similar effects as parent drug.

= may differ in some pharmacokinetic or dynamics

= example =

ethynylestradiol = analogue of estradiol

↳ similar estrogenic pharmacodynamics

↳ different pharmacokinetics =

can be taken orally.

Prodrug:

prodrug $\xrightarrow{\text{metabolism}}$ Metabolite = active form

example = acetyl salicylic acid $\xrightarrow{m.}$ salicylic acid
outside body inside body

Preventive = prophylactic drugs

(3)

= prevent diseases

= Reduce the ~~intest~~ intensity of disease effects

Diagnostic drugs:

= Diagnosing diseases.

= Diagnosing sites of lesions.

= etc.

Therapeutic drugs:

a - Curative drugs.

b - palliative or symptomatic drugs.

c - Supportive drugs.

d - substitutive drugs.

e - Restorative drugs.

f - placebo-drug

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A - Curative drugs :

= eliminate drug causes = cure diseases

= e.g. = antibiotics

B - Palrative or symptomatic drugs :

= reduces diseases undesirable effects.

= may cure or not from original disease.

= examples = NSAID = ++ = headache
= hyperthermia

= . antiepileptics } No full cure
= . antihypertensives } is expected

C - Supportive drugs =

= help maintain patient life → in preparation for therapeutic procedures.

= example = in conjunction of general anaesthesia

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d- Substitutive drugs:

= substitute naturally occurring substances in the body. → diseases.

- examples: vitamins
- salts
- hormones

- all through life
- certain period

e- Restorative drugs:

= restore body health.

= restoration period

= rebuild stages.

placebo drugs :-

(6)

Drug response = - biological response
- psychological response
= present in all drug effects

psychological effects:

- = positive effects = help patients.
- = negative effects = disturbed life.

uses of placebo drugs:

- Control drug = new drugs. = drug trials.
- improvement of patient state:
 - = No materialistic effect.
 - = No harmful effects.

chemotherapy:

(7)

Drugs used in =

a- = treatment of cancer.

b- = treatment of diseases caused by infectious diseases caused by microorganisms:-

- bacteria
- viruses
- fungi
- protozoa
- helmenthics.

antibiotics =

= any substances produced by or derived from a living organism → inhibits the growth or destroys another organisms.

= used in treatment of infectious diseases.

- e.g. bacteric
- = fungi
- etc -

antioxidant = Neutralizes oxygen free radicals.

Biologicals :

= vaccines

= genetically engineered proteins.

mechanism of action :

interact with proteins of =

• bacteria

• viruses.

• endogenous proteins

} mediate diseases
→ producing reactions.

Chelating agents :

chemicals that form complexes with some metal ions

→ rendering them harmless → Complex

is safely excreted

examples :

• Copper

• lead

• Zinc

} poisoning.

Drug Contraindications =

conditions that prohibit drug use

Drug Compliance = patient compliance

9.

Definition: patient's adherence to instructions of prescribed drug or, any other treatment program.

- do not dispense drugs at all
- buy the drugs, but do not take them at all
- they take part of the drug, don't completely the rest of it.
- not coherence of taking drugs
- no commitment to physician instructions

Reasons:

- financial causes
- psychological or disturbing symptoms
- the appearance of disturbing side effects
- patient unable to understanding drug instructions → wrong drug utilization.
 - deficiency of instructions
 - physicians
 - pharmacists
 - deficiency of patient perception

(10)

- patient negligence to follow instructions despite understanding these instructions.

due to : - nature of the disease :-
· psychological diseases
· chronic diseases.

- nature of dosage regimen :-
- complicated dosage regimen = more than one drug.

- Nature of the drug :

- more than one drug

- long period of administration

- Nature of drug dispensing sites :

→ crowded outpatient pharmacy