****

**NAME; MUHAMMAD UBAIDULLAH**

**ID; 13888**

**CLASS; BS DT**

**PAPER; PHARMACOLOGY II**

**SUBMITED TO; NADRA KHALEEQ**

**GMAIL;** **ubaid704@gmail.com**

**Q1:**

**ANS: -**

**ANTHELMINTICS: -**

* Anthelmintics is a term used to describe a drug used to treat infection of animals parasitic worms this includes both flat worms eg. Flukes (nematodes)
* The parasite is of huge importance for human tropical medicine and for veterinary medicine.
* Experience from the development of anthelmintic resistance suggest that modern control schemes.
* Anthelmintic resistance is defined as genetic mutation in the worm pollution which alters susceptibility to drugs being used for treatment.

**MECHANISIM OF ACTION OF MEBENDAZOLE: -**

* Like albendzole, this drug selectively damages intestinal cells in these worms, thus inhibiting the uptakes and intracellular transport of glucose and other nutrients into these parasites.
* This activity leads to the destruction of the epithelial lining and subsequent death of the parasites.

**SIDE EFFECT: -**

* Mebendazole is a relatively safe drug although some mild transient gastrointestinal problem may occur.

**MECHANISIM OF ACTION OF PRAZIQUANTEL: -**

* This drug exact mechanisim of action is unknown.
* Praziquantel may stimulate muscular contraction of the parasite resulting in a type of spastic paralizes, which causes the worm to lose it hold on intestinal or vascular tissue
* Eg. Enzymes, phagocytes (to destroy the parasites)

**SIDE EFFECT: -**

* Paraziquantel is associated with number of frequent side effects including;
* Gastrointestinal problem
* abdominal pain,
* nausea,
* vomiting,
* CNS effect,
* headache
* dizziness and
* mild hepatotoxicity

**MECHANISIM OF ACTION OF PIPERAZINE CITRATE: -**

* this drug appears to paralyze the worm by blocking the effect of acetylcholine at the parasites neuromuscular junction.
* The paralyze worm can then be dislodged and expelled from the host human intestine during normal bowel moments

**SIDE EFFECTS: -**

* Side effect is such as;
* Headache
* Dizziness
* Gastrointestinal disturbance may occur during piperzine citrate administration
* These effect are generally mild and transient.

**Q2**

**ANS a; -**

**TYPE 1 DIABETES MELLITUS; -**

* A form of chronic hyperglycemia caused by immunologic destruction of pancreatic beta cells

**TYPE 2 DIABETES MELLITUS: -**

* A form of chronic hyperglycemia cause by resistance to insulin often progress to insulin deficiency

**ANS b;**

* These are different ways to inject insulin to the body is called insulin delivery
* There are many devices for the insulin into the body like;
* Syringe
* Insulin pump
* Jet injection
* In my opinion insulin pen are effective
1. Because they are easily cerile and handling
2. Avoid over dose and under dosing
3. Do not need refrigeration
4. Have memory to recall fast dose
5. More durable than others

**Q3;**

**ANS: -**

**GENERAL ANESTHESIA: -**

* These are the drug that include revisable loss of consciousness all sensation.
* Features;
* Reversible loss of consciousness
* Reversible loss of sensation
* Analgesia and amnesia
* Muscular relaxation and abolition of reflexes

**Local anesthesia;**

* The drug which when are applied topically or injected locally blocked nerve conduction and cause revisable loss of all sensation in the part supplied by the nerve.

**STAGES**

**STAGE1:**

* The patient is conscious but drowsy

**STAGE2;**

* Patient losses conscious
* Muscular tone increased
* Breath is irregular

**STAGE3;**

* Respiration become regular
* Muscle relax
* Reflexes are gradually lost

**STAGE4;**

* Respiration and vasomotor center are depressed
* Death occur within few minutes

**MECHANISIM OF ACTION; -**

* Local anesthesia act on voltage sensitive Na+ channels
* Local anesthetic are week bases
* Partly unionized
* Penetrate the nerve membrane
* Then enter the axon
* Then reionozation of local anesthetics
* Local anesthetics gains access to it receptors in the open stage of the channel
* LAs block the voltage gated NA+ channel from inside
* Prevent generation of action
* No generation and conduction of impulses to CNS

**Q4;**

**ANS;**

**MECHANISIM OF ACTION OF ALKYLATING; -**

* The alkylating agent R causes alkylation of guanine nucleotide located in the DNA strand cross links are then found between two alkalyted guanines thus creating strong bond between or within the DNA strands this case the cross link effectively tie up DNA molecules reducing the ability of DNA

**ADVERSE REACTION; -**

* GI distress
* Nausea
* Vomiting
* Loss of apatite
* Blood disorders
* Leukopenia
* Thrombocytopenia
* CNS neuro toxicity
* Unusual tiredness
* Confusion
* Depression
* Anxiety

**EXAMPLES;**

* Nitrogen mustard
* Cisplatin
* Nitrosoureas
* Alkylsulfonates
* Ethyleneimines
* Triazines

**ANTIMETABOLITES;**

* Cells are able to synthesizes genetic material from endogenious metabolites known as purine and pyrimidine nucleotides
* Certain inti cancer drug is structurally similar to these endogenous metabolites and compete with these compound during RNA DNA biosynthesis
* These drugs are called antimetabolites
* Its genetic material is carry out normal protein synthesis because of a lack of functional DNA RNA

**ADVERSE EFFECT**

* Hapototoxity
* CNS effect
* Skin disorders

**PLANT ALKALOIDS**

* These agents are also called as antimitotic drug because these agents vincristine, vinblastine inhibit the formation of the mitotic apparatus, where as other paclitaxel inhibit breakdown of these microtubules
* These drugs disrupt the normal function of mitotic apparatus and prevent the cell from dividing and proliferating.

**ADVERSE EFFECT;**

* Blood disorder anemia leukopenia
* Hyper sensitivity reaction
* Muscle pain
* Peripheral neuro pathiesis

**MONOCLONAL ANTIBODIES:**

* These agent use antigen-antibodies mechanism, every cancer cell have specific antigen on their surface
* When administered, the monoclonal antibody is attracted directly to the cancer cells, without any appreciable effect on healthy tissue
* That is healthy cell lack the antigen that is present on the cancerous cell and should there for remain unaffected by the drug.
* Once it has reach to the cancerous cell monoclonal antibodies exert several complex effect that limit cell function

**ADVERSE EFFECT**

* Blood disorder
* Hypertension
* Fatigue
* Rashes
* GI disorder and others

**Q5;**

**ANS a: -**

**ROLE OF VITAMIN K IN BLOOD CLOTTING**

* Vitamin K is important in blood clotting because the clotting factor in blood clotting need vitamin K for other activation
* Vitamin K depend clotting factor are II, VII, IX, X need vitamin for other action

**ANS b;**

**THROMBOLYTIC AGENTS;**

* Thrombolytic agents are the substance that’s help in the breaking of thrombosis within the blood vessel
* It is used in ST elevation myocardial infraction stroke and cases of severe venous thrombolisim
* Thrombolysis is often used in emergency treatment to dissolve blood clots that found in arteries
* feeding the heart and brain
* The main cause of heart attack and ischemic stroke and in the arteries of the lungs acute pulmonary embolism

**EXAMPLES: -**

* Streptokinase
* Streptokinin etc

**\*\*\*THE END\*\*\***