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Q No: 1

(A)

TYPE I diabetes :-

A form of chronic hyperglycemia caused by immunological destruction of pancreatic beta cells.

TYPE II diabetes

A form of chronic hyperglycemia initially caused by resistance to insulin, often progresses to insulin deficiency.

Part (B)

Insulin Preparations :-

Human insulin is manufactured by bacterial recombinant DNA technology. The available forms provide 4 rates of onset and durations of effect that range from rapid-acting to long acting.

Because due to 4 rates of insulin this type of insulin are very effective and more important for our life activity.

Q no: 2

Part (A)

Role Of Vitamin K

Vitamin K is a group of structurally similar - fat soluble vitamins. The human body requires for complete synthesis of certain proteins that are pre-requisites for blood coagulation that the body needs for controlling binding of calcium in bones and other tissues. The vitamin K related modification of the proteins allows them to bind calcium ions which they can not do otherwise without vitamin K. Blood coagulation is seriously impaired and uncontrolled bleeding occurs. Low levels of vitamin K also weaken bones and promote calcification of arteries and any other soft tissues.

Part (B)

Thrombolytic agents :-

A drug that is able to dissolve a clot thrombus and reopen an artery or vein. Thrombolytic agents may be used to treat a heart attack stroke deep vein thrombus clot in a deep leg vein. Pulmonary embolism and occlusion of a peripheral artery or indwelling catheter. All thrombotic agents are streptokinase etc.

For example:-

The most commonly used clot busting drugs, also known as Thrombolytic agent, include Eminase, anistreplase, Reteplase, Streptase, Streptokinase, and Alteplase, etc.

Q no: 3

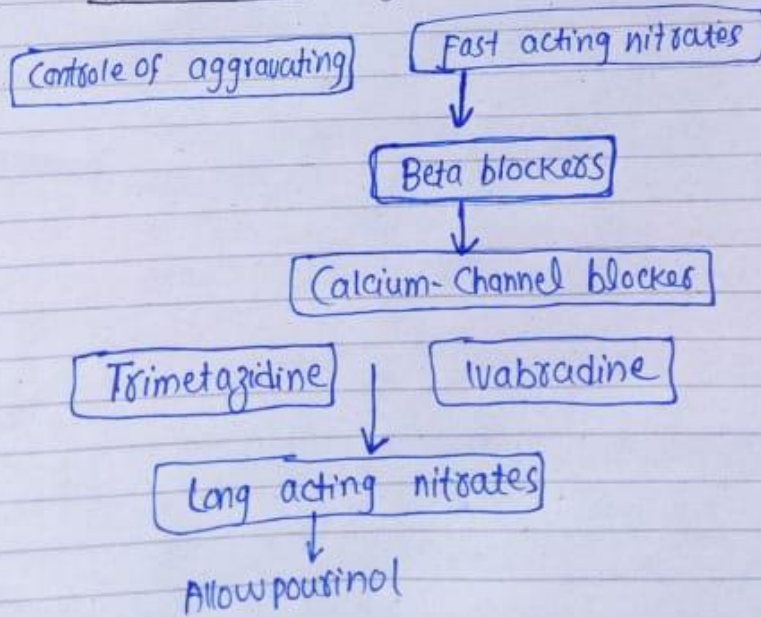
Part (A) :- Adverse Effects Of Organic nitrates :-

=> The most common adverse effects of organic nitrates are headache.

=> hypotension, facial flushing and tachycardia and any other high doses of organic nitrates can also cause postural

=> Sildenafil potentiate the action of nitrates to preclude the dangerous hypotension that may occur. This combination is contraindicated.

Part (B) Treatment Of algorithm :-



Qno: 4

Part (a)

Primary hypertension :-

essential hypertension is the term applied to the 95% of the hypertensive patients in which elevated blood pressure result from complex interaction between multiple genetic and environment factors.

Secondary hypertension :-

it accounts for only 5-7% of hypertensive patients. Secondary hypertensive should be suspected in patients in whom hypertension develops at an early age.

Part (b) :-

Effect of Renin on hypertension :-

Plasma Angiotensinogen levels are close enough to Michaelis constant for Renin that small increase in either Renin or Angiotensinogen may increase Angiotensin II production and alter blood pressures. notably, elevated Renal Specific expression of Angiotensinogen causes systemic hypertension without a change in circulating Angiotensin II.

Q No: 5

Part (A)

Left Heart failure

- => Tachypnea
- => Pulmonary edema
- => Cyanosis
- => apex beat
- => Gallop rhythm
- => Heart murmurs

Right heart failure

- Pitting peripheral edema
- ascites and hepatomegaly
- jugular vein distension.

Part (B)

Pharmacotherapy Of Heart Failure

most patients with symptomatic systolic heart failure (SHF) should be routinely treated with an angiotensin-converting enzyme (ACE) inhibitor, a β blocker and a diuretic. the benefits of these medications on slowing HF progression, reducing morbidity and mortality, and on improving symptoms are clearly established.