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Commentary

Cardiovascular Medicines and their Functional Effects

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INTRODUCTION

The most extensively used medicine as heart and blood vessel functioning agent are drugs that work on the cardiovascular system. Examples of illnesses such as hypertension (higher blood pressure), angina pectoris (thorn pain due to insufficient coronary blood flow into the heart muscle), heart failure (inadequate muscular output in comparison to the demands of the body) and arrhythmia may be informative (disturbances of cardiac rhythm).

Modern cardiovascular medicine and research have seen the development of novel state of the art techniques and analytics. This convergence is currently helping unravel the mechanistic determinants, pathways, and potential therapeutic targets in cardiovascular diseases.

Medication treatment plan will depend on how heart disease affects the cardiovascular system, meaning heart and blood vessels. Not all heart disease is the same, so it's not all treated the same way. For instance, heart disease may cause excessive blood clotting, or it may increase blood pressure, or it could do both. As a result, it may need more than one medication to manage your heart disease symptoms.

The clinical effects of a specific agent result from the sum of its actions at different receptors, and the profile of effects may change in a dose-dependent manner. In addition, effects may vary with alterations in intravascular volume.

Heart function effects

Drugs have three primary consequences on the function of the heart. It may alter the strength of cardiac muscle contraction and heart Function Effect drugs have three primary consequences on the function of the heart. It can change the contraction power of the heart muscle inotropic effects it can influence the timing of the heartbeat, or it can affect the heartbeat chronotropic effects, rhythmic effects.

Contractions

Inotropic agents are medicines that impact heart muscle contraction and hence the cardiac output. If they improve cardiac contraction strength, medicines have a positive inotropic impact. The most significant group is cardiac glycosides found in the fox glove, *Digitalis purpura* and in other plants , CG are the most extensively used medicine or drugs that work on the cardiovascular system. Examples of illnesses such as hypertension higher blood pressure, angina pectoris thorn pain due to insufficient coronary blood flow into the heart muscle, heart failure inadequate muscular output in comparison to the demands of the body and arrhythmia may be informative disturbances of cardiac rhythm. The strength of cardiac muscle contraction *via* the binding and inhibition of the effects of the membrane enzyme, which extrudes sodium ions from within cells, is thought to enhance cardiac glycosides. These medications also increase calcium release from internal storage, leading to an increase in intracellular calcium. This then raises the contracting power because intracellular calcium ions initiate muscle cell shortening, rhythm abnormalities produced by cardiac glycosides are partially caused by depolarization and partly by the increase. Because the same underlying mechanism causes these rhythm disruptions.

The heart rate

The heart rate is regulated by opposing sympathetic and parasympathetic neurons and epinephrine activity, which is produced by the sugar gland. The heart rate is increased by Norepinephrine, produced by sympathetic neurons in the heart, and the epinephrine released from the surrenal gland. Propranolol, which slows the heart and is widely used to treat angina attacks and heart rhythm problems, is a competing antagonist to suppress the stimulating activity of norepinephrine on the heart. Atropine inhibits acetylcholine receptors and is used to avoid excessive heart slowing during anaesthesia.

Blood vessel medications

Drugs shows impact on blood vesicles by changing the condition of contraction and blood flow of the smooth muscle in the vessel wall. Through the smooth muscular lining and vasodilators, such medications are categorised as vasoconstrictors if they induce them to relax. Medicines can directly affect or operate indirectly in the smooth muscle cells, affecting the nerve activity of the autonomous nerve system that regulates vasoconstriction or vasodilatation. The action of vasodilators is also an indirect method which works by releasing a smooth muscle relaxing chemical.

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The most common medications with antihypertensive effects, such sleepiness, standing maze (owing to a decline in blood pressure), impotence and allergic responses, have a wide range of adverse effects. Although generally rather small, the long-term nature of antihypertensive medication means that side effects are a substantial concern and better medicine is continually sought.

CONCLUSION

Patients may not need to undergo certain treatments or procedures that are part of the diagnosis and treatment of a disease if they get medication treatment. Cardiovascular medication, for example, may prevent patients from needing coronary catheterization or bypass surgery.

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CONFLICT OF INTEREST

There is no conflict disclosed in this article.