

# Good example of essay on use of beta blocker

[Experience](#), [Failure](#)



Heart failure is mostly described as a chronic disease where the heart is unable to pump the blood sufficiently to the body, with other terms like congestive cardiac failure often been used interchangeably. Some of the symptoms are leg swelling, excessive tiredness and breath shortness. Breath shortage is mostly the worse since lying down and sleeping at night is difficult. Most of the common causes that lead to heart failure are blood pressure, atrial fibrillation and valvular heart disease. These causes lead to failure in functioning of the heart structure mainly due to left ventricular and faint normal ejection fraction. To know the severity of the disease it's usually tested by decrease in exercise. In its treatment beta-blockers are used, these are drugs that are particularly used in management of cardiac arrhythmias, majorly to protect the heart from any second attack after a secondary prevention. They block the action of adrenaline which brings excitement, norepinephrine and endogenous catecholamine with some blocking adrenergic receptor activations. Beta has three receptors and located in the kidney, heart and the rest located in lungs, liver and skeletal muscles. The beta receptors found on the heart cells makeup part of the nervous system that leads to stress. This paper describes four drugs used in heart failure treatment and their mechanism. Carvedilol Carvedilol is one of the beta blockers; it is mild to severe congestive heart failure and hypertension and can also be used after a heart attack. This drug cannot be taken under some conditions such as allergy in asthma, severe liver disease, bronchitis, emphysema and serious heart condition such as heart block. Though research is under way to know if the drug goes into breast milk to harm a nursing baby, Carvedilol works as both beta blocker and alpha

blocker through Nor epinephrine stimulating the nerves that control heart muscles binding to the receptors. This lowers blood pressure reducing the hearts workload . It also binds the blood vessels making them to constrict, and lower blood pressure making Carvedilol reduce effects on the heart than other beta blockers. This drug comes with its own side effects with some not needing any treatment these effects are stomach ache, swelling of the fingers and hands, sweating temporary blindness, tenderness on the upper right side of the body, yellow skin and wheezing (drugs. com). Bisoprolol Bisoprolol is one of the drugs listed by the world health organization's list of essential medicine as one of the most basic medications in the health system. It belongs to the beta blocker group and is majorly used in treatment of cardiovascular disease and more selective adrenergic receptor blocker. As per the United States food and drug administration it approved the Zebeta oral tablets as the newest molecular entity. This drug is beneficial in treatment of hypertension, by reducing blood flow to the heart, and it's able to prevent chances of recurring heart attacks. In treatment of cardiac ischemia the drug helps in reducing the activities of the heart muscle leading to reduction in oxygen and nutrients . with this kind of short duration of action this beta blocker has to be given at least three times a day in modified -release formulation so that the administration is adequate for blood pressure. When also taking this drug a lot of precaution must be taken due to its side effects such as low blood sugar because of over dosage, bronchospasms is also a problem due to blockage in lungs caused by decrease in simulation. Metoprolol Metoprolol was first made in 1969 and is a selective beta blocker can also be used in cure of several illnesses but

especially hypertension that causes heart failure. This drug is employed as succinate or metoprolol tartrate which is an immediate release but succinate is extended. As a beta blocker, this drug also has its side effects which include sleeping problems, depression, and diarrhea and sight problems. The drug may also cause reduction in blood flow especially to the hands and feet making them to feel numb and cold. For the smokers the side effects are worse due to high penetration across barriers in the blood , if not used well it may lead to other complications of the body such as loss of hair, mood changes and trouble breathing. Precaution must be taken when using this drug especially if the patient had other complications such as chest pain, extreme fatigue, irregular breathing, and swelling of parts of the body such as feet, face, fingers and legs. Overdosing on this drug causes severe blood pressure, metabolic acidosis and seizures, to confirm this blood or plasma tests on concentrates may be measured. Nebivolol is beta blocker with effects from vasodilators that help in treatment of hypertension and left ventricular failure and its highly selective under some circumstances. This drug is a little bit unique from Carvedilol since it has nitric oxide which potentiates vasodilatory effect . among the four beta blockers it's the only one that causes dilation of blood vessels. Nebivolol has antihypertensive effect since it lowers the blood pressure through reduction of peripheral vascular resistance and an increase in stroke volume with cardiac output been preserved. In a research done of enrolling patient, groups showed that Nebivolol had higher antihypertensive responses than patients in other drugs. According to studies done they have suggested that nebivolol does reduce beta blocker related side effects like impotence, fatigue and

bradycardia. However according to FDA they contradict with this claiming it associated with warnings regarding cardiac failure, peripheral vascular disease and diabetes. but like any other beta blocker the Nebivolol has its own side effects as per research done to know the usage of the drug 10 percent of those who use it were found to have effects in dizziness, slow heart and another 1percent and 10 percent had problems with oedema, drop in blood pressure while sitting or standing. Other effects found but yet to be confirmed were: low blood sugar levels and an increase in sensitivity to allergens. (nps)beta blockers can be described as effective in treating heart failure but they have a lot effects that include: nausea, diarrhea, dizziness, hair loss, vision problem, nightmares, fatigue, heart block, and bronchospasm. Due to high penetration in the blood-brain barrier by bêta blockers such us metoprolol they are more likely to cause vivid dreams and insomnia. Hypoglycemia as seen can be caused by beta-blockade because the receptors normally stimulate glycogen breakdown . blockade of beta receptors only may lead to increase in hypertension,

ConclusionIn conclusion beta blockers can be described as effective in treating heart failure but they have a lot effects that include: nausea, diarrhea, dizziness, hair loss, vision problem, nightmares, fatigue, heart block, and bronchospasm. Due to high penetration in the blood-brain barrier by bêta blockers such us metoprolol they are more likely to cause vivid dreams and insomnia. Hypoglycemia as seen can be caused by beta-blockade because the receptors normally stimulate glycogen breakdown . blockade of beta receptors only may lead to increase in hypertension, reduce blood flow and cardiac output . looking at the four drugs nebivolol seems to

be more suitable in treatment of patients considering it has nitric oxide that makes it more effective.

## **Works Cited**

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