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ORCIPRENALINE & HYOSCINE BUTYLBROMIDE – POOR MAN'S PACE MAKER - A SHORT CASE REVIEW STUDY

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ABSTRACT

Bradycardia are a common clinical finding and comprise a number of rhythm disorders including SA Node dysfunction and AV conduction disturbances. Clinical presentation varies from asymptomatic electrocardiogram findings (eg, during a routine examination) to a wide range of symptoms such as heart failure symptoms, near syncope or syncope, central nervous symptoms, or nonspecific and chronic symptoms such as dizziness or fatigue. Conditions resulting in brady arrhythmic disorders are divided into intrinsic and extrinsic conditions causing damage to the conduction system. Furthermore brady arrhythmias can be a normal physiologic reaction under certain circumstances. A proper diagnosis including a symptom-rhythm correlation is extremely important and is generally established by noninvasive diagnostic studies (12-lead electrocardiogram, Holter electrocardiogram, exercise testing, event recorder, implantable loop recorder). Invasive electro physiologic testing is rarely required. If reversible extrinsic causes of brady arrhythmias such as drugs (most often beta-blockers, glycosides and/or calcium channel blockers) or underlying treatable diseases are ruled out, cardiac pacing is usually the therapy of choice in symptomatic brady arrhythmias. In this article of the current series on arrhythmias we will review the pathophysiology, diagnosis and treatment options of brady arrhythmias, especially sinus node dysfunction and atrio ventricular conduction blocks.[1]

In this study the young adult presented with epigastria pain and Dyspnea on exertion NYHA Grade II on investigation found to have Bradycardia with Heart Rate 25 BPM and Normotensive maintaining normal spo.[2]

Patient was started with ALUPENT in one case and HBB 10 mg in the another case. Soon after giving the above drugs there was increase in heart rate noticed to NSR, without any adverse reactions. Patient later on shifted to higher cardiac intervention center for Permanent Pace maker.

Probable mode of action of these drugs mentioned below

Alupent 10 mg TDS

Orciprenaline (also known as metaproterenol), a synthetic amine, is structurally and pharmacologically similar to isoproterenol. Orciprenaline is used exclusively as a bronchodilator. The pharmacologic effects of beta adrenergic agonist drugs, such as orciprenaline, are at least in part attributable to stimulation through beta adrenergic receptors of intracellular adenyl cyclase, the enzyme which catalyzes the conversion of adenosine triphosphate (ATP) to cyclic- 3',5'- adenosine monophosphate (c-AMP). Increased c-AMP levels are associated with relaxation of bronchial smooth muscle and inhibition of release of mediators of immediate hypersensitivity from cells, especially from mast cells. Orciprenaline is a moderately selective beta (2)-adrenergic agonist that stimulates receptors of the smooth muscle in the lungs, uterus, and vasculature supplying skeletal muscle, with minimal or no effect on alpha-adrenergic receptors. Intracellularly, the actions of orciprenaline are mediated by cAMP, the production of which is augmented by beta stimulation. The drug is believed to work by activating adenylate cyclase, the enzyme responsible for producing the cellular mediator cAMP.[2]

HBB – Hyoscine Butyl Bromide

Buscopan 10 mg TDS used various time in the study increases the heart rate from 35 BPM to 60 BPM. HBB found to have adverse drug effect which causes the increased heart rate and normal person can even give rises Sinus tachycardia without causing myocardial ischemia.[3]

CONCLUSION

This Study concludes that the periphery center and non-availability of the cardiac center, above these drugs can do wonder and used effectively till the tertiary care cardiovascular care arrives.

http://www.revespcardiol.org/en/bradyarrhythmias-and-conduction-blocks/articulo/90141585.

https://www.drugbank.ca/drugs/DB00816.

https://www.drugs.com/mmx/buscopan.html.