Calcium channel blockers (dihydropyridines) have varying effects on insulin release

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Treatment of hypertension has reduced the incidence of stroke, heart and renal failure. However the incidence of Coronary Heart Disease (CHD) is not reduced to same degree. Many of the drugs advocated as first line drugs in step-wise therapy has been shown to cause carbohydrate intolerance, and it is an independent risk factor in the development of CHD. Since 1990's individualized therapy in the treatment of hypertension has been advocated, whereby another class of antihypertensive drugs, such as calcium channel blockers (dihydropyridines) may be used as a first line therapy. Intracellular calcium plays important role in the excitation contraction coupling as well as the excitation-secretion coupling of hormones, including insulin. Absolute and relative lack of insulin can cause glucose intolerance. The purpose of the study was, to compare the effect of calcium channel blockers on insulin release from the rat isolated pancreas by perfusion technique, adapted from Loubatieries et al., 1972. The doses used were based on therapeutic peak plasma concentrations. Diazoxide has been used as positive control, i.e. known insulin suppressant drug. In the study Isradipine (10ng/ml) and Nicardipine (200ng/ml) showed significant suppression of the insulin release, this effect is dose dependent. Amlodipine (5ng/ml) significantly did not suppress the insulin release. Thus Amoldipine is found more useful drug amongst other calcium channel blocker. In conclusion different calcium channel blockers have varying effects on insulin release.

Biography

Ghulam Rasool Mashori gained B Pharmacy degree in 1984, from University of Sindh, Jamshoro, Pakistan and has completed his PhD at the age of 34 years from Faculty of Medicine, University Kebangsaan (National) Malaysia. He served with QC of Pharmaceutical Industry in Hyderabad. He then worked as Production Supervisor, M&B (Pvt.) Ltd, Wah Cant, Pakistan (1985-1987). In public sector, served as Scientific Officer & Lecturer (Pharmacology), NIH, Islamabad (1987-1999). As per seniority he was assigned duties as Director, Central Drugs Testing Laboratory, Karachi, Government of Pakistan (1999 to 2005). He then joined as an Associate Professor of Pharmacology & Therapeutics, Jinnah Post-Graduate Medical Center, Karachi (2005-2009). He was posted as Director, National Institute of Management Quetta in October 2009 to supervise training courses. Then he was posted to perform as Deputy D.G Health (Pharmacovigilance). Since December 2010, he joined as Professor in Pharmacology, Peoples University of Medical and Health Sciences for Women (PUMHSW). Due to his performance and dedication, currently he has been assigned additional work as Director, Institute of Pharmaceutical Sciences, PUMHSW. He attended many short courses and trainings, seminars, workshops. He has also delivered many lectures/talks in seminars/workshops. More than 21 Research publications are on his credit published in reputed Journals.

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