Effect of nifedipine and captopril on glucose metabolism

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According to ISH (2014), the normal BP ranges from 120/80mmHg to 140/90mmHg. Hypertension is the sustained elevation of resting systolic ≥140mmHg & diastolic ≥90mmHg BP (Carretero & Operil, 2000). CHD is more common in diabetic than non-diabetic hypertensives (James et al., 2000). CHD/CVDs are the main cause of deaths worldwide. Treatment of hypertension has reduced the incidences of stroke, heart failure & renal failure however; the incidence of CHD has not been reduced to that degree. A study was designed as per Helsinki criteria to reveal the effects of antihypertensive drugs (Nifedipine and Captopril) on glucose metabolism, conducted on nondiabetic and diabetic hypertensive patients. Minimum of 12 patients (6-non-diabetics and 6-diabetics) were selected/recruited for two sets. In Set-A non-diabetic hypertensives were kept on placebo for 2-weeks first, GTT was performed, and then treated with Nifedipine with an average dose 23.8±7.4mg/day. When the diastolic BP normalized ≤90mmHg at least for 6-weeks period, then second GTT was performed. Set-B diabetic hypertensive patients were stabilized on Nifedipine at an average dose 21.3±3.5mg/day for 6-weeks period first, then GTT was conducted, followed by a placebo period for 2-weeks, then the patients went through second GTT for quantifying glucose, insulin and catecholamine blood levels and results were compared. Similar procedure applied on Captopril with an average dose 78.6±26.7mg/day on non-diabetic and 87.5±62.7mg/day on diabetic hypertensives to normalize diastolic BP at ≤90mmHg. In conclusion, study reveals that, Nifedipine is a diabetogenic drug. On the other hand Captopril is a safer drug in both types of hypertensive patients.

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, he 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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