Introduction

Hypertension and its complications

Patients with essential hypertension may be in an insulin resistant state that might contribute to development of glucose intolerance, dyslipidemia and cardiovascular disease ***(Ferrannini et al., 1997)***. Several investigators examine the effects of antihypertensive drugs on glucose and lipid metabolism or insulin resistance in essential hypertension. ***(Shionoiri, 1997; Pallaret, 1999& Shionoiri et al., 1990)*** .

One characteristic of hypertension in diabetics is increased vascular smooth muscle tone. Recent observations suggest that this increase in tone is due to an impaired cellular response to insulin. In isolated rat aorta, physiological doses of insulin attenuated the contractile response to vasoactive factors (Phenylephrine, serotonin, KCL) indicating that insulin may normally modulate vascular smooth muscle contractile response. Insulin resistance syndrome or syndrome x is a clustering of several metabolic abnormalities that together constitute multiple risk factors for ischemic heart disease (I.H.D) ***(Sowers,1999).***

Effective antihypertensive therapy should include agents that do not adversely affect carbohydrate metabolism. Commonly used antihypertensive agents, such as thiazide, thiazide - like diuretics and B-blockers, are associated with glucose intolerance and increased insulin resistance ***(James,1999).*** Selective α1 adrenoceptive blockers were established as one of the first line drugs

for the treatment of hypertension because of their promising depressor effect and relative good tolerability ***(Joint National Committee,1999)***. It has been suggested that administration of long – acting α1 adrenoceptive blockers dose not affect glucose and lipid metabolism ***(Ferrari, 1998)***, but little information is available in dyslipidemia and or insulin resistant hypertensive group.

Hypertension is the medical term for high blood pressure. The measurement of an individual's blood pressure is always expressed as systolic pressure over diastolic pressure. For example, normal blood pressure for adults is considered to be in the range of 120/80 millimeters of mercury. Generally, blood pressure above 140/90 is considered to be high for adults, and blood pressure under 90/60 is considered to be low for adults ***(Roland ,2001).***

High blood pressure has been associated with a variety of significant health risks. According to the American Heart Association, the cause of about 90 to 95 percent of the cases of high blood pressure is unknown. However the condition is easily detected and usually controllable ***(Robert ,2001).***

Over the past 10 years the actual number of deaths due to hypertension has increased by 40 percent. High blood pressure contributes to 75 percent of all strokes and heart attacks. According to data gathered from the Framingham Heart Study, 50 percent of people who have a first heart attack and two thirds of those who have a first stroke have blood pressures higher than 160/95. ***(Roland,2001)***

The condition is especially deadly among African-Americans,

who tend to be diagnosed at younger ages and with higher blood pressure than other ethnic groups. Unfortunately, many people with high blood pressure are unaware that they have the condition and do not seek treatment. Access to medical care also contributes to undertreatment of hypertension. Thus, the incidence of hypertension among people in lower socioeconomic groups may be underestimated because of inadequate access to medical care ***(Agistino,2001).***

Left untreated, high blood pressure will gradually continue to rise even higher over the years, causing the heart to overwork itself to the point where serious damage can occur. Untreated, hypertension also places other systems (e.g., circulation) and organs (e.g., the kidneys) at greater risk of damage that could lead to dysfunction or failure ***(Hambery,2001)***.

High blood pressure has been associated with a variety of significant health risks which include heart disease (e.g., congestive heart failure,sudden cardiac death, cardiomyopathy) , Stroke, Aneurysm (a weakness in the artery wall where it balloons out to more than 1.5 times its normal size and is in danger of rupturing, often resulting in sudden cardiac death), Hardened arteries (atherosclerosis), Kidney failure and Retinopathy (loss of vision) ***(Hambery ,2001).***

The risk of developing one or more of these serious healths conditions increases as blood pressure rises. Hypertension has often been called the "silent killer" because mild to moderate levels usually go unnoticed by patients until serious damage has already