Approval Sheet

Prevalence of hypertension and hyperlipidemia among diabetic in al-Riyadh in Saudi Arabia

Thesis submitted for partial Fulfillment of
the Master Degree in Epidemiology

By
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(M.B.B.Ch)

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List of Abbreviations

ADA	American Diabetes Association
BMI	Body mass index
CDC	Centers for disease control and prevention
DCCT	Diabetes Control and Complication Trial
ESRD	End stage renal disease
FBG	Fasting blood glucose
GAD65	Autoantibodies to glutamic acid
GDM	Gestational Diabetes Mellitus
HDL	High density lipid
HLA	Human leucocytic antigen
HNF	Hepatocyte nuclear factor
HTP	Hypertension
IAAs	Autoantibodies to insulin
IA-2, IA-2B	Autoantibodies to tyrosine phosphate
ICAs	Islet Autoantibodies
IDDM	Insulin dependent diabetes mellitus
IDL	Intermediate Density Lipoprotein
IFG	Impaired fasting glucose
IGT	Impaired glucose tolerance
LDL	Low density lipid
MNT	Medical Nutrition Therapy
MODY	Maturity onset diabetes of the youth
NDDG	National diabetes data group
NIDDM	Non insulin dependent diabetes mellitus
OGTT	Oral glucose tolerance test
PAI	Plasminogen activator inhibitor
SMBG	self monitoring of blood glucose
TC	Total Cholesterol
2-h BG	2hours blood glucose
2-h OGTT	2 hours glucose tolerance test
VLDL	Very Low Density Lipoprotein
WHO	World Health Organization

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Contents

Introduction:

There has been an increase in the prevalence of diabetes mellitus over the past 40 years, both in the US and worldwide. The worldwide prevalence of diabetes in 2000 was approximately 2.8% and is estimated to grow to 4.4% by 2030. This translates to a projected rise of diabetes from 171 million in 2000 to well over 350 million in 2030.

The epidemic of diabetes will continue to rise as there is growing prevalence of obesity in children, which predisposes to diabetes to diabetes.

There is considerable evidence for an increased prevalence of hypertension in diabetic persons. In a large prospective cohort study that included 12,550 adults, the development of type 2 diabetes was almost 2.5 times as likely in persons with hypertension than in their normotensive counterparts.

Similarly, evidence point to increased prevalence of hypertension in diabetic persons. Moreover, each pathophysiological disease entity serves to exacerbate the other. Both hypertension and diabetes predisposes to the development of cardiovascular disease (CVD) and renal disease.

Subjects with diabetes are at about 60% increased risk of early mortality. The age-adjusted relative risk of death due to cardiovascular events in persons with type 2 diabetes is three-fold higher than in the general population.

The presence of hypertension in diabetic patients substantially increases the risk of coronary heart disease, stroke, nephropathy and retinopathy. Indeed, when hypertension coexists with diabetes, the

risk of CVD is increased by 75%, which further contributes to the overall morbidity and mortality of an already high-risk population.

Generally, hypertension in type 2 diabetic persons clusters with other CVD risk factors such as microalbuminuria, central obesity, insulin resistance, dyslipideamia, hypercoagulation, increased inflammation and left ventricular hypertrophy.

This clustering risk factor in diabetic patients ultimately results in the development of CVD, which is the major cause of premature mortality in patients with type 2 diabetes.

Aim and Objectives

Aim of work

The objectives of this study are to:

1. **The aim of this study is to estimate the prevalence of hypertension and dyslipidaemia among patients with diabetes mellitus in outpatient clinic in Al- Riyadh in Saudi Arabia.**

2. **To study different risk factors associated with hypertension and dyslipidaemia.**

3. **Outline suitable preventive procedure to decrease complications.**