

Profile of non-insulin-dependent diabetes mellitus in India

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ABSTRACT

The Indian Council of Medical Research (ICMR) conducted a national study for evaluation of the clinical profile of NIDDM, with special emphasis on determining vascular complications of diabetes. The study enrolled 4625 subjects, 2276 males and 1849 females. BMI, HbA_{1c} and lipid values did not seem to influence the vascular complications in these diabetics.

INTRODUCTION

Ethnic, environmental, nutritional and socio-cultural factors contribute to variations in occurrence and presentation of various diseases in a population. The Indian Council of Medical Research conducted a national study at nine university teaching hospitals between 1984 and 1987 for evaluation of clinical profile of NIDDM. Consecutive cases of diabetes were evaluated regarding history, physical status and metabolic profile. Special studies were conducted to determine the vascular complications of diabetes.

MATERIAL AND METHODS

4625 subjects (2776 males and 1849 females, age 35-55) with NIDDM were enrolled for this analysis. In this cohort, age of onset of diabetes was less than 25 years in 14.2% (onset of NIDDM is often after 35 years age in India). In 12.5% duration of diabetes was of more than 14 year duration (long duration is rare in our country). Body mass index was > 25 in 32% of subjects, this obesity was present in only one-third of the NIDDM group. Severe degree of hyperglycemia i.e. HbA_{1c} > 12% was present in 30.6% and insulin therapy was being followed in only 12.7% while OHA were being prescribed in 61%. The vascular disease was evaluated based on the following criteria:

Large Vessel Disease (LVD)

1. Coronary Artery Disease (CAD)*: ECG-Minnesota code, Probable/Possible.
2. Cerebro-Vascular Disease (CVD) : TIA and stroke
3. Peripheral Vascular Disease (PVD): Intermittent claudication, absent pulses or gangrene.

Small Vessel Disease (SVD)

1. Retinopathy: Fundoscopy (haemorrhages and exudates more than 3, or proliferative retinopathy)
2. Nephropathy: Significant proteinuria (two plus) or serum creatinine > 2.5 mg/dl.

RESULTS

Large Vessel Disease

	P e r c e n t	
	Male	Female
Coronary Artery Disease		
Probable	8.9	5.2
Possible	15.8	21.3
Cerebrovascular Disease	2.6	3.0
Peripheral Vascular Disease	0.4	0.2

Small vessel disease

Retinopathy	16.3	14.3
Nephropathy	15.4	13.9

DISCUSSION

In males, CAD probable was higher in diabetics with duration > 14 years, while SVD was significantly increased after a 7-year duration. While coronary probable is more frequent in males, females predominate for coronary possible. Similarly, gangrene and amputation were more frequent in males, while in females intermittent claudication was observed more frequently. Raised blood pressure (systolic and diastolic) was observed

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to be related to SVD. Small vessel disease (background retinopathy) is more in males while for proteinuria, there is no sex predilection

BMI, HbA_{1c} and lipid values did not seem to influence the vascular complications in the diabetics in this study. Five year follow-up data is being analysed.

SUGGESTED FURTHER READING

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