

INTRODUCTION & AIM OF WORK

Introduction

Different prevalence rates of type 2 diabetes mellitus are observed in different ethnic groups. In England, the ethnic groups originally from the Indian Subcontinent has relatively high rate of diabetes. The age-adjusted prevalence of known diabetes among Asians is 3 – 4 times higher than that of Europeans (**Vanderpump et al; 1996**).

The overall prevalence of DM among the population of the Egyptian Deserts is quite low (1.84 %) at the age above 30 years and (1.33 %) at the age above 10 years. The prevalence of DM at the Egyptian Desert is distinctly lower than the prevalence at rural agricultural areas of the Nile Valley (1/3rd to 1/3.5) and is much lower than the urban areas of the country “1/5th to 1/6th” (**Arab; and El-Sewy; 1996**).

The C-Peptide / insulin ratio is an index of hepatic insulin clearance (**Buffington and Kitabchi; 1994**). Hepatic insulin clearance is receptor mediated and linked in part to intracellular insulin actions (**Duckworth; 1988**).

In North Europe, several metabolic abnormalities in the normal tolerant relatives have been identified and it was proposed that the decreased hepatic insulin clearance helps to maintain normoglycaemia in the face of combined insulin resistance and decreased insulin secretion (**Humphsiss et al., 1997**).

Haffner et al; 1992 reported decreased hepatic insulin clearance in non-diabetic Mexican-Americans when compared with non-Hispanic white control subjects, and proposed that it represented an adaptive response to

maintain adequate circulating insulin levels in the presence of insulin resistance.

Scidell et al; 1988, showed evidence strongly suggests that the decreased hepatic insulin clearance in the relatives of type 2 diabetic patients was not secondary to abdominal obesity, and therefore provides support for an adaptive response the nature of which requires further investigation.

Aim of this work

It was found that there were marked differences in the prevalence of NIDDM in different ethnic groups in Egypt (urban, rural and desert).

The aim of this thesis is to find out the role of hepatic insulin clearance – as a predictor for the etiology of these differences - in different ethnic groups of Qalioubya Governorate.