

Identificación de Factores de Riesgo de la Diabetes Mellitus Tipo 2 en Adultos de 30 a 60 Años de edad en la Comunidad de Isla Aguada, Municipio de Ciudad del Carmen, Campeche.

Identifying Risk Factors for Type 2 Diabetes Mellitus in Adults 30 to 60 years of age in the Community of Isla Aguada, municipality of Ciudad del Carmen, Campeche.

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Resumen

La Diabetes Mellitus es un síndrome metabólico caracterizado por hiperglucemia, consecuencia de defectos en la secreción y/o en la acción de la insulina. La hiperglucemia crónica se asocia en largo plazo con daño, disfunción e insuficiencia de diferentes órganos especialmente de los ojos, riñones, nervios, corazón y vasos sanguíneos.

Objetivo: Identificar los factores de riesgo de Diabetes Mellitus de tipo 2 en una población rural del estado de Campeche. **Material y Métodos;** Se realizó un estudio observacional, de tipo descriptivo, transversal y retrospectivo, a 213 individuos, de entre 30 y 60 años de edad, adscritos al Centro de Salud de Isla Aguada, Campeche, con diagnóstico de Diabetes Mellitus de tipo 2 ,en periodo 2010 a 2011. Se registró los datos de sexo, edad,

antecedentes heredo-familiares, índice de masa corporal y valores de colesterol y triglicéridos. **Resultados:** Se encontró que la edad promedio en la que se presenta la Diabetes Mellitus de tipo 2 es de 50.64, con predominio en mujeres, hay un incremento en el riesgo directamente proporcional a la edad; la obesidad representa el 61.5%, la dislipidemia un 41.3% y los antecedentes heredo-familiares el 36% de riesgo.

Conclusiones: Los factores de riesgo relacionados a Diabetes Mellitus de tipo 2, en la población de Isla Aguada, fueron principalmente la obesidad y la dislipidemia, encontrándose predominio en mujeres y un aumento del riesgo a padecerla proporcional a la edad.

Palabras claves: Factores de Riesgo, Diabetes Mellitus, adultos.

Abstract

Diabetes mellitus is a metabolic syndrome characterized by hyperglycemia resulting from defects in secretion and / or insulin action. (1) Chronic hyperglycemia is associated in long-term damage, dysfunction and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels.

Objective: To identify risk factors for Type 2 Diabetes Mellitus in a rural population of the state of Campeche. **Material and methods;** An observational study of 213 individuals, aged between 30 and 60 years of age, assigned to the Health Center of Isla Aguada, Campeche, diagnosed with Type 2 Diabetes Mellitus was performed, descriptive, cross-sectional and retrospective, in period 2010 to 2011. Data on sex, age, family history-I inherited, BMI and cholesterol and triglyceride values were recorded. **Results:** We found that the average age at which diabetes mellitus type 2 is 50.64 occurs, predominantly women, there is an increased risk directly proportional to age; Obesity accounts for 61.5%, 41.3% dyslipidemia and history-family inherited 36% risk. **Conclusions:** The risk factors related to type 2 Diabetes Mellitus, in the town of Isla Aguada, were mainly obesity and dyslipidemia, being more common in women and increased risk to suffer proportional to age.

Key words: Risk Factors, Diabetes Mellitus, adults.

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Introduction

Mellitus Type 2 diabetes is a chronic disease of great epidemiological interest because the effect of progress in society, has had much to do with the increased prevalence and incidence of this disease, in other words, the Mellitus Diabetes type 2, it has been parallel increase with obesity, sedentary lifestyle and age. The World Health Organization (WHO) has predicted that by 2030 the disease will affect 370 million people, representing an increase of 114% worldwide compared to 2000; it is estimated that the American continent ranks third in incidence of this disease, and that Mexico ranks as the 7th leading cause of death.

Previous studies have found a strong association of obesity, family history of type 2 diabetes mellitus, age, intake of saturated fats and dyslipidemia, among others, with the onset of type 2 diabetes mellitus.

Taking into account the statistical data and increasingly diabetes mellitus type 2 is diagnosed, and almost always in advanced stages of late complications, conducting this study is decided as a challenge for the early diagnosis of this disease through extensive knowledge of associated risk factors present in the community of Isla Aguada to propose a preventive strategy of the disease.

Knowledge of specific risk factors in the community will develop preventive activities, promoters, and health policies to modify the population most at risk and thereby reduce the rates of disease and its complications.

The main objective of this study was to determine the frequency of risk factors associated with diabetes mellitus type 2, in the town of Aguada Island.

MATERIAL AND METHODS

An observational, descriptive, cross-sectional and retrospective was held in the community of Isla Aguada, municipality Ciudad del Carmen, Campeche; It was conducted between the period of August 1, 2010 to July 31, 2014, by selecting the files of subjects aged, between 30 and 60 years old, attached to the health center of the community of Isla Aguada with diagnosis of diabetes mellitus type 2.

Inclusion criteria: People of both sexes, aged between 30 and 60 years old, diagnosed with Type 2 Diabetes Mellitus, who have clinical record at the Health Center Isla Aguada. Regardless of belonging or not to the Popular Insurance program and an inhabitant of the town.

Exclusion criteria: Patients with incomplete medical records, with multiple pathologies or not included in the Type 2 Diabetes Mellitus.

Records that met strictly with these criteria only selected, obtaining a sample size of 213 records, of which-family he inherited, obesity and biochemical cholesterol values data for sex, age, background and triglycerides were obtained updated (results of a period not exceeding 6 months). Subsequently, this information was collected individually on the record sheets.

Statistical procedure: The data were summarized in a spreadsheet and processed. The results (measures of central tendency and absolute numbers) are represented as a support, as a graphics.

RESULTS

The characteristics of the population,

This is a sample of 213 individuals with age range between 30 and 60 years, of both sexes, 96 men and 117 women, all residents of Isla Aguada diagnosed with Diabetes Mellitus Type 2. During the study, the average age present type 2 Diabetes Mellitus, is 50.64 years (Table 1)

TABLE 1.

Characteristics of the study population (n=213)

		Rango	Promedio
Sexo	Masculino /femenino 96 /117		
Edad		30 a 60 años	50.64

Classified by age range we find that there is a greater frequency in individuals aged 46 to 60 years old, which resulted in a total of 124 cases, representing 58.2%, compared with 41.8% prevalence in individuals aged 30 to 45 years, with a total of 89 cases. (Table 2) (Figure 1).

TABLE 2

Prevalence by age range

EDAD (AÑOS)	N	PORCENTAJE
30 - 45	89	41.8%
46 - 60	124	58.2 %

Figure 1



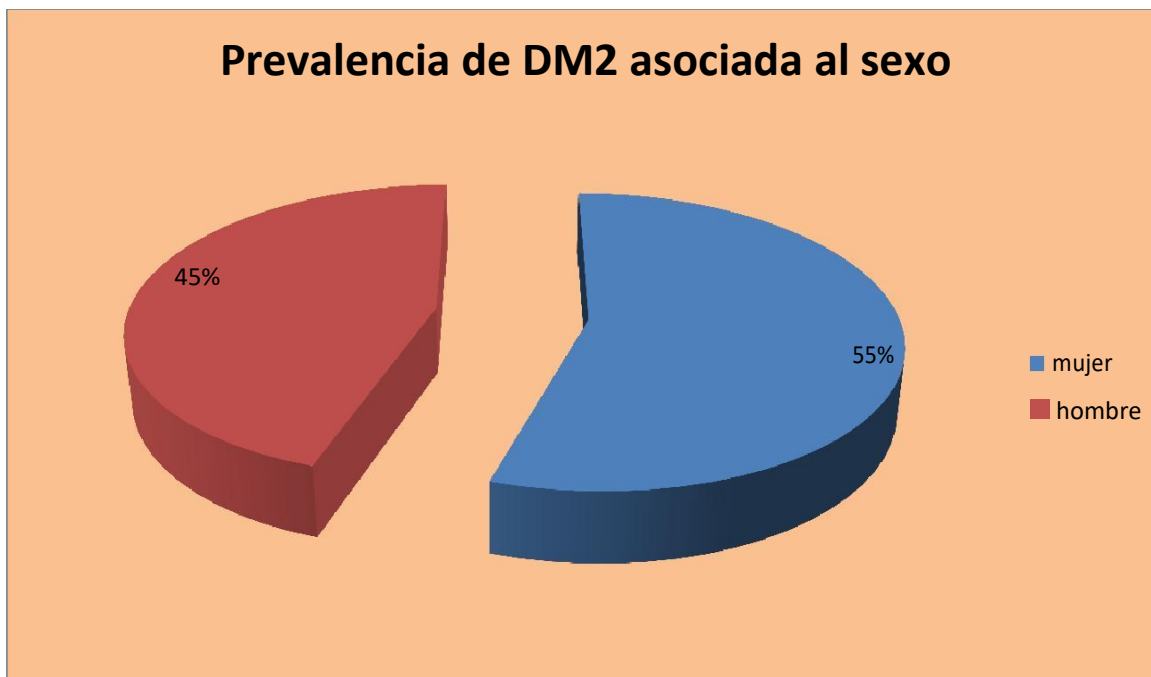
About sex, as already mentioned, a total of 213 individuals, 96 of them men, bearers of DM type 2 and 117 women (Table 3) with the same diagnosis, so a trend is found predominantly in studied the female gender with 55%, compared to 45% prevalence in men. (Figure 2)

TABLE 3

Prevalence of Type 2 Diabetes Mellitus Associated sex

SEXO	N	PORCENTAJE
MUJER	117	55%
HOMBRE	96	45%

Figure 2



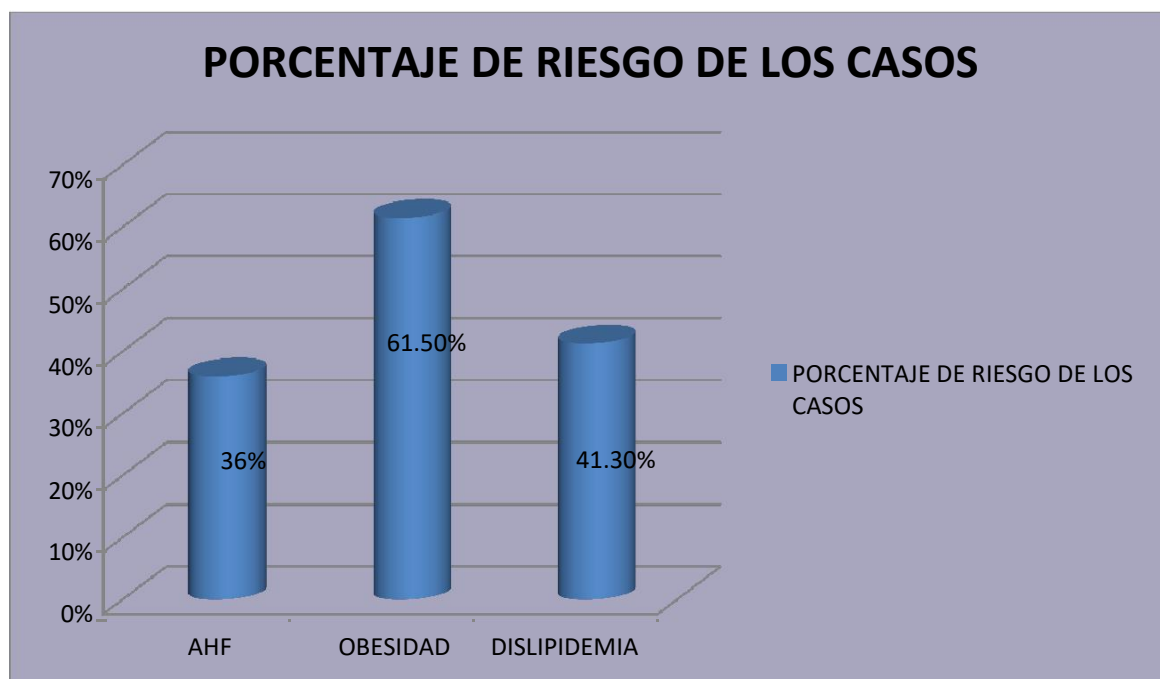
36% of the population has a history of type 2 DM direct line, either grandparents, parents or siblings, with a total of 77 cases. a prevalence of 61.5% obesity, 131 cases, with body mass index greater than 30, dyslipidemia was found in 41.3%, with a total of 88 cases (Table 4) (Figure 3) was found.

TABLE 4

Percentage of the sample reporting risk condition

CONDICIÓN	N	PORCENTAJE
ANTECEDENTES	77	36%
HEREDO-FAMILIARES	131	61.5%
OBESIDAD		
DISLIPIDEMIA	88	41.3%

Figure 3



Dyslipidemia was found in 41.3%, with a total of 88 cases, of which 19.24%, ie 41 patients, showed higher hypercholesterolemia 200mg / dL and 22.6%, 47 patients, most hypertriglyceridemia 150mg / dL. (Table 5) (Figure 4) (Figure 5)

TABLE 5

Dyslipidemia as risk factor

TIPO	N	PORCENTAJE
HIPERCOLESTEROLEMIA	41	19.2 %
HIPERTRIGLICERIDEMIA	47	22.1 %
TOTAL	88	41.3 %

Figure 4

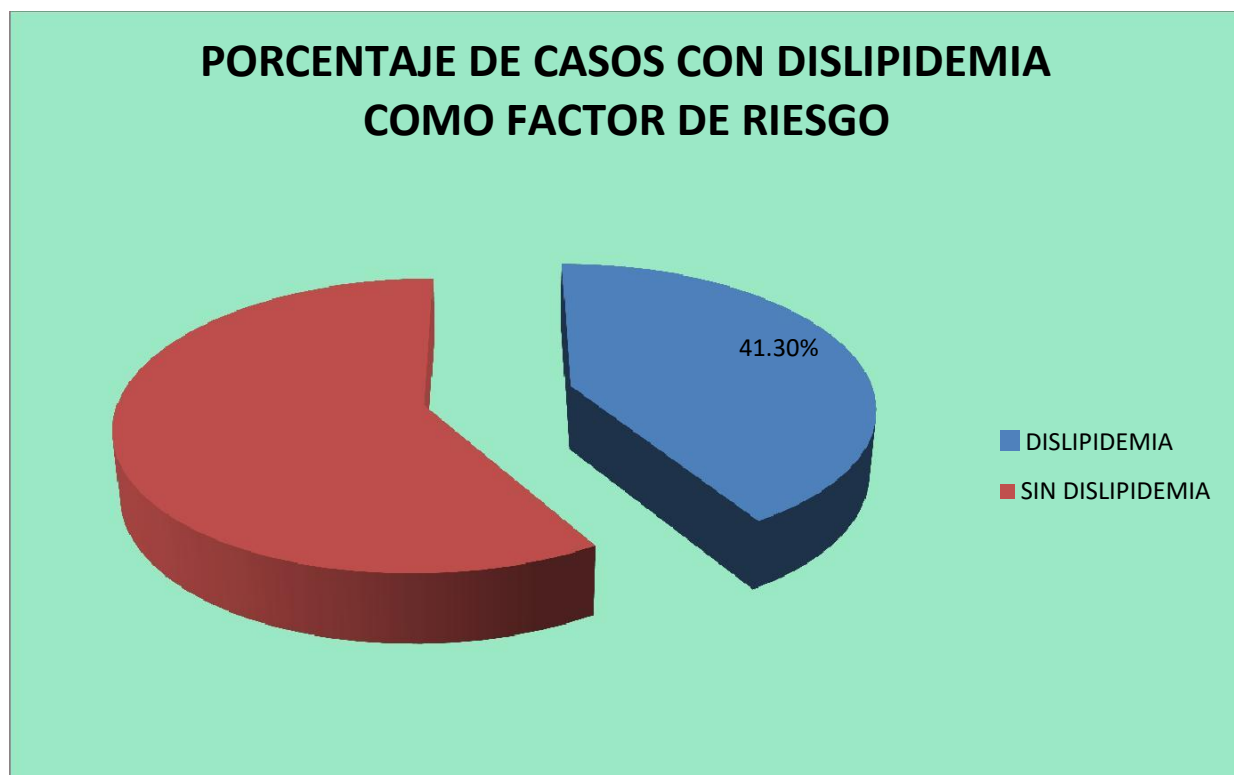
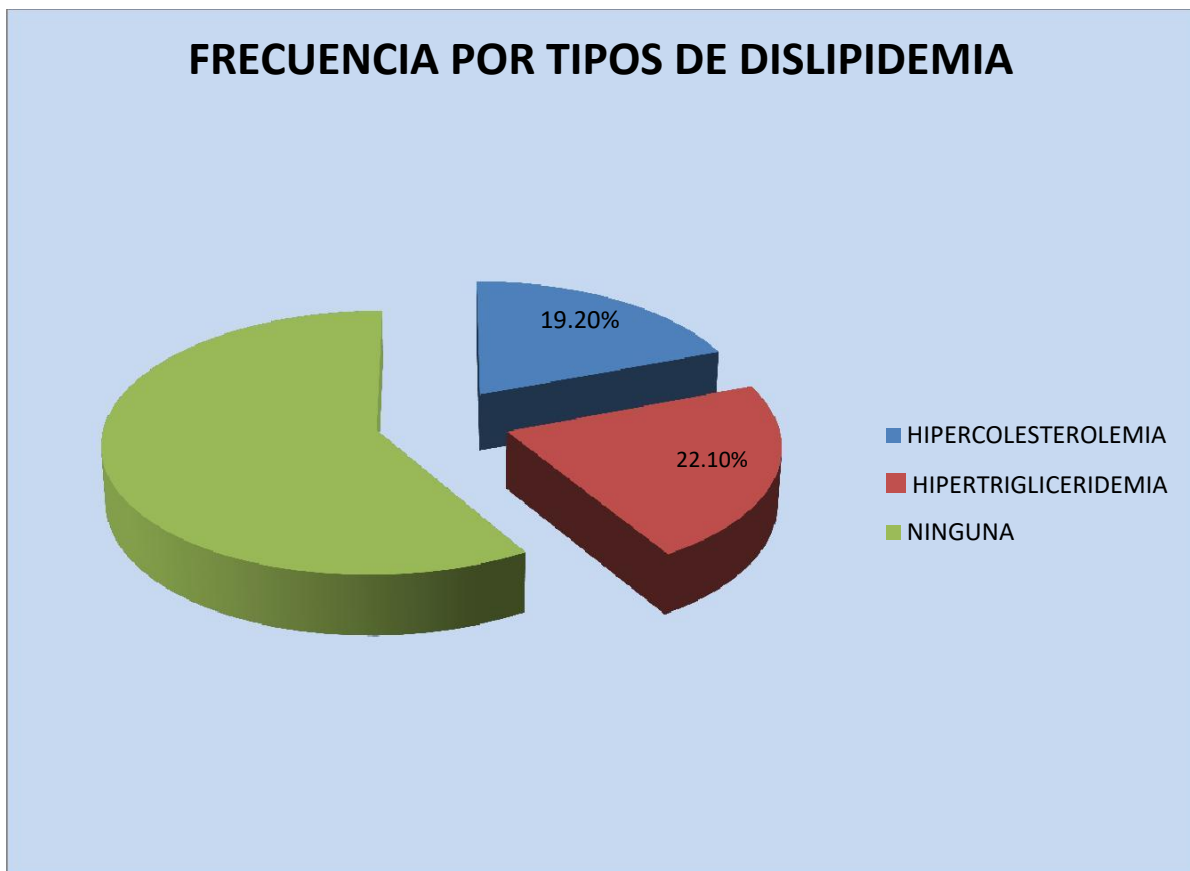


Figure 5



Having said all this we find 36% of the population with history inherit-family ($n = 77$), 61.5% prevalence of obesity ($n = 131$) and 41.3% of dyslipidemia ($n = 88$), as a risk factor for diabetes mellitus type 2 (Figure 3) (Table 4)

DISCUSSION

In this study, we found 61.5% of finding obesity of the population of Isla Aguada. These values were very high compared with those obtained in studies in population of Brena, Lima with results of 22.8%, however you have to consider the type of selection of subjects, which also belong to a rural population and the aged are older than 15 years, which makes

vary from study to study, taking into account that the universe of the sample and the Mellitus Diabetes type 2, is associated with an increase according to increasing age, explain the high prevalence obesity in our study, applied to elderly and margins as wide difference between the two investigations.

It is very important to mention that the WHO considers the Caribbean as a region where the growing number of diabetics to 2025, shall be 150%, plus most, would be between 45 and 64 years and a male: female ratio of 0: 7 ; is greater female predominance.

These projections represent a significant increase in the number of diabetics, those who sue, medical care and suffer from late complications that often accompany these patients in underdeveloped countries. Thus the estimated costs that diabetes produces in detection, management and secondary prevention would be very large.

In relation to the risk factors studied and associated with type 2 DM, it was also found that there is a significant prevalence in relation to inheritance, as expected and has been supported by several studies that address this issue, made in Mexico .

Another a fact that striking are the figures of cholesterol and triglycerides often in 19.24% and 22.06% respectively, relatively low and with a considerable difference in other studies, with figures doubling our results, a possible explanation for this phenomenon, whether different economic status of the study populations, so the type of feed is also different, in urban populations predominantly found a diet high in calories with excessive intake of saturated fat and our study population is a means rural which may explain our results.

Recognizing obesity, heredity, age, dyslipidemia, as predisposing factors for Diabetes Mellitus type 2, their timely management and proper education of high-risk patient undoubtedly reduce the numbers of prevalence and morbidity of this condition, that every day are increasing in Mexico and in our study population, here the importance of the implementation of this study.

CONCLUSIONS

- Obesity has proven to be the main risk factor for presenting Diabetes Mellitus Type 2, which is consistent in most studies in Mexico.
- Definitely the prevalence of the disease increases with increasing age.
- A history of diabetes inherited-family Mellitus Type 2, in direct blood relatives, has proven to be an important risk factor for this disease manifest, which supports the hereditary nature of this condition.
- Currently there is no consistent trend in the frequency of disease by sex, even if the data point to an excess d predisposition in women, is not enough, so this idea is still vague.
- Obesity is a modifiable factor, so its detection early in patients with high predisposition of Diabetes Mellitus Type 2 (carrying more than 1 risk factor) and elimination of the condition, will significantly decrease the prevalence of disease and the appearance of early and late complications.

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HOJA DE RECOLECCIÓN DE DATOS

DIAGNOSTICO: DIABETES MELLITUS TIPO 2

SEXO _____ NUMERO DE EXPEDIENTE _____

EDAD _____

ASPECTOS ANTOPOMÉTRICOS:

PESO _____ Kgs TALLA _____ mts IMC _____

OBESIDAD:

PRESENTE: _____ AUSENTE: _____

ANTECEDENTES HEREDO - FAMILIARES

Familiares Consanguíneos ≥18 años	Diagnóstico de Diabetes Mellitus 2
Abuelos	
Padres	
Hermanos	

*En caso positivo anotar quien y en caso negativo anotar "ninguno".

LABS: FECHA DE TOMA: _____

Colesterol Total _____ mg/dl

Triglicéridos _____ mg/dl

DISLIPIDEMIA:

PRESENTE: _____ AUSENTE: _____

Fecha _____