

CELIAC DISEASE, A SILENT KILLER.

Enfermedad Celiaca, un asesino silencioso.

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SUMMARY

Celiac disease is a chronic autoimmune disease caused by the ingestion of gluten- a group of proteins present in oats, wheat, barley and rye- among genetically predisposed individuals; causing a decrease in the diet nutrients absorption capacity. (1)

The identification of the disease is key to avoid disease development at the intestinal (malabsorption syndrome) or immunological level (lupus).

Thus far, there have been no studies about the prevalence of celiac disease in the population of Chuquisaca, which is why a pre-diagnosis was made based on the key signs and symptoms in the disease to establish an approximate number of potential celiac patients.

Methods. Descriptive, cross-cutting research on 339 students -17 to 28 years old, of the Faculty of Medicine of the San Francisco Xavier University of Chuquisaca- participated in the study.

As a result of this study, it was established that 41% of women and 56% of men are aware of celiac disease; while 59% and 44%, respectively, have no knowledge of the disease.

Thus, the presence of signs and symptoms characteristic of celiac disease was established in high rates of the studied population and an increased frequency of these symptoms was also found in female students.

Although they can be manifestations linked to intolerance to gluten or even symptoms of mere gastritis, with the surveys made among Medicine students, the present study shows that the celiac disease is a fact in the healthcare careers students of San Francisco Xavier University.

The main objective of our study identifies possible cases of celiac disease based on the pre-diagnosis supported by the sign-symptomatology presented among the students of the Faculty of Medicine.

KEYWORDS:

Celiac disease, pre-diagnosis, Sucre, prevalence.

RESUMEN

La celiaquía es una enfermedad crónica autoinmune provocada por la ingesta de gluten, un conjunto de proteínas presentes en la avena, trigo, cebada y centeno, en individuos genéticamente predispuestos, generando una disminución de la capacidad de absorción de nutrientes de la alimentación.(1)

La determinación de la enfermedad es clave para evitar complicaciones a nivel intestinal (síndrome de la mala absorción) o inmunológico (lupus).

Hasta la fecha, no se han realizado estudios acerca de la prevalencia de enfermedad celiaca en la población chuquisaqueña, es por eso que se elaboró un prediagnóstico en base a los signos y síntomas claves en la enfermedad para establecer una cantidad aproximada de posibles pacientes celiacos.

Métodos. Diseño descriptivo de corte transversal y participaron en la determinación, 339 universitarios, de 17 a 28 años, de la facultad de Medicina de la Universidad San Francisco Xavier de Chuquisaca.

Como resultado de este estudio, se estableció que el 41% de las mujeres y el 56% de los hombres tienen conocimiento sobre la celiaquía mientras que el 59% y el 44%, respectivamente, no tiene conocimiento de la enfermedad.

Así también se establecieron la presencia de signos y síntomas característicos de la enfermedad celiaca en altos porcentajes de la población estudiada, también se registró una mayor frecuencia de los mismos en estudiantes mujeres.

Si bien pueden ser manifestaciones de una intolerancia al gluten o inclusive alguno más de los síntomas de una simple gastritis, con las encuestas realizadas a los estudiantes de Medicina, el presente estudio demuestra que la enfermedad celiaca es una realidad en el área de salud de la Universidad San Francisco Xavier.

El objetivo principal de nuestro estudio, identifica posibles casos de enfermedad celiaca en base al pre-diagnóstico apoyado en la signo-sintomatología que presentan los estudiantes de la facultad de Medicina.

PALABRAS CLAVE:

Enfermedad celiaca, prediagnóstico, Sucre, prevalencia.

INTRODUCTION

Celiac disease is the standing intolerance to gluten -present in wheat, oats, barley and rye- that triggers in genetically predisposed individuals, a serious injury in the small intestine mucosa.

These cereals are widely found in Bolivians' diet, which is why the importance of this research and the different effects caused by their consumption.

Celiac disease has three clinical forms that can appear differently and at different ages. Characteristically, celiac disease reveals itself during childhood and before school age. The classic forms usually appear months after the introduction of gluten in the diet. As a consequence of this malabsorption syndrome, there is weight loss, hypokalemia, undernourishment, apathy and muscular atrophy. In adults, these manifestations tend to be scarce.

Hence, the diagnosis and screening of celiac patients' first-degree relatives is important. Other groups in which it is mandatory to screen for the disease are: patients with diabetes mellitus type 1, thyroid and liver autoimmune diseases, connective tissue diseases (such as Sjögren's syndrome), Down and Turner syndromes and selective IgA deficiency. (3) The typical epigastric pain or epigastric burning that are associated with swelling and Tympanites.

It is vital to keep in mind that the probability of suffering from celiac disease increases in certain risk groups. These include primarily first-degree relatives and certain autoimmune diseases.

Several studies are carried out to confirm this disease; for example, the serology test, intestinal biopsy, auto-antibodies with TTGA (tissue transglutaminase) and blood count, with these tests celiac disease is diagnosed. (4)

Currently, the conditions for diagnosis in the countries of the region are characterized by lack or lack of availability of serological antibodies, limitations for biopsy studies of the duodenum-jejunal mucous and restrictions of genetic markers that have limited the figures related to the celiac disease.

The only treatment available is a strict and for life diet without wheat, oats, barley and rye. It is advisable to never start the diet without a prior biopsy that justifies it. It is suitable that celiac diet also includes natural food, such as: milk, meat, fish, eggs, fruits, vegetables, pulses and gluten-free cereals (rice and corn).

Caution should be exercised regarding industrialized food-products, as they may contain gluten as ingredient. It is necessary to refer to suitable Food and Medications lists. Ingestion of small amounts of gluten, continuously, can lead to significant intestine disorders.

Figure 1 Gluten Food: Restricted

1. Wheat, rye, oats and barley flour.
2. Bread, buns, cakes, pies, cookies, biscuits, and other pastry products, made with any of these flours.
3. Italian pasta or similar, such as: noodles, noodles and wheat flour/semolina.
4. Milkshakes and malted food. Chocolates (except those authorized).
5. Infusions and beverages prepared with cereals, beer, malt and barley water.
6. Manufactured products in which any of the aforementioned flour kinds comes into its composition, for example: ready-to-serve soups, custards, and prepared flans, ice cream and candies.

Source: "Enfermedad Celiaca", Polanco Isabel

Figure Nº 2: Gluten Food: Allowed

1. Milk and its by-products (cheese, curd, butter and cream)
2. Meat, fish, shellfish and eggs.
3. Vegetables, fruits and tuber vegetables (potato)
4. Rice, corn, in the form of flours and grain and popcorn.
5. Tapioca, soy and soy flour.
6. Pulses: lentils, chickpeas and beans.
7. Dry Fruits.
8. Sugar and honey.
9. Oils, margarine (without additives).
10. Salt, vinegar, yeast without gluten, pepper.

Source: "Enfermedad Celiaca", Polanco Isabel

Celiac disease is a common condition that affects approximately 1/100 people in Sucre-Bolivia, being more frequent in women. A significant rate of patients (75%) are undiagnosed (6), hence the need to carry out an thorough search for symptoms or combinations of symptoms that should arouse clinical suspicion, in addition an important consideration is to identify key signs and symptoms to be able to perform a pre-diagnostic examination in a quick and inexpensive way since this disease is often confused with gastritis. (7)

The main objective of this study is to identify possible cases of celiac disease based on a pre-diagnosis supported by the sign-symptomatology presented among of the healthcare careers students of the of San Francisco Xavier de Chuquisaca University, 2017.

Materials and Methods

A Descriptive, observational cross-cutting study was carried out. The research subjects were 339 university 17-28 years old students of Medicine school in San Francisco Xavier de Chuquisaca University. Administrators, professors, university students from other faculties and any other person from San Francisco Xavier University were excluded.

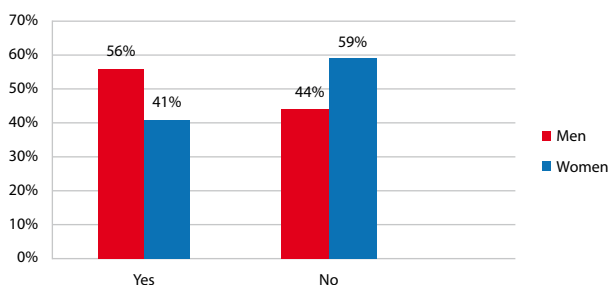
To provide a pre-diagnosis, a survey based on the celiac disease sign-symptomatology was elaborated. The techniques used in this study are those of stratified sample, since the population is divided into subgroups or "strata" according to the degree of knowledge they have, and if this is the case, the degree of disease in studied individuals.

Results

A total of 339 undergraduates from the Faculty of Medicine of the San Francisco Xavier University were studied, 58% of them were women and 42% were men. By age groups, 14.5% of them were 17-18 years old, 32% 19-20 years old, 28% 21-22 years old, 20% 23-24 years old, 4.5% 25-26 years old and 1%, 27-28 years.

Chart N ° 1 shows the knowledge that people have about celiac disease.

Population rates, based on the knowledge degree about celiac disease



Source: Survey "celiac disease" applied to the studied population.

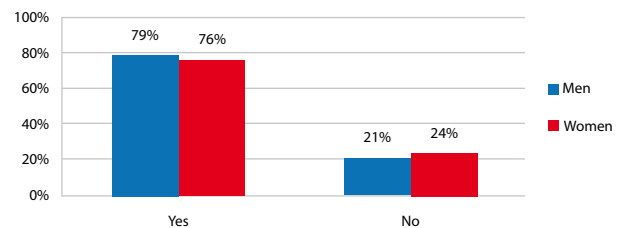
The graphs show that of 100% of the entire women population in Medicine School, 59% has never heard

about celiac disease and 41% has a slight idea of what celiac disease is.

Likewise, of the 100% of the men population in the Faculty of Medicine, 56% has never heard about celiac disease and 44% has a slight idea of what celiac disease is.

Chart 2 shows the knowledge that the studied population has about gluten.

Population rates according knowledge degree about what gluten is



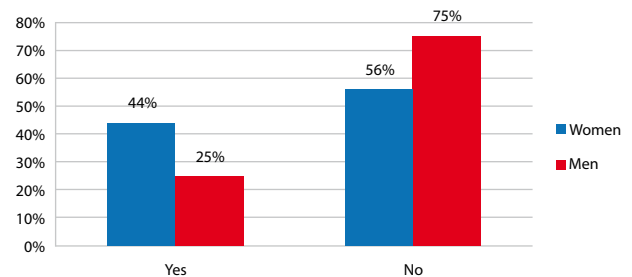
Source: Survey "celiac disease" applied to the studied population.

Of 100% of the studied men population in the Faculty of Medicine, 21% has never heard about gluten and 79% has a slight idea of what gluten is.

Of 100% of the surveyed population of women in the Faculty of Medicine, 24% has never heard about gluten and 76% has a slight idea of what gluten is.

In **chart 3**, the population is shown according to the abdominal pain unrelated to heavy food intake.

Population based on abdominal pain unrelated to heavy food intake

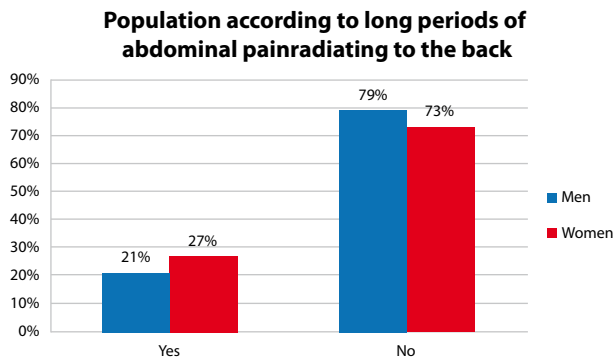


Source: Survey "celiac disease" applied to the study population.

Of the 100% of the male population, 75% does not have abdominal pain related to the intake of heavy food and 25% if it presents abdominal pains related to the intake of heavy food.

Of 100% of the female population, 56% does not present abdominal pains related to heavy food intake and 44% does experience abdominal pains related to heavy food intake.

Chart 4 shows the male and female population according to long periods of pain radiating towards the back

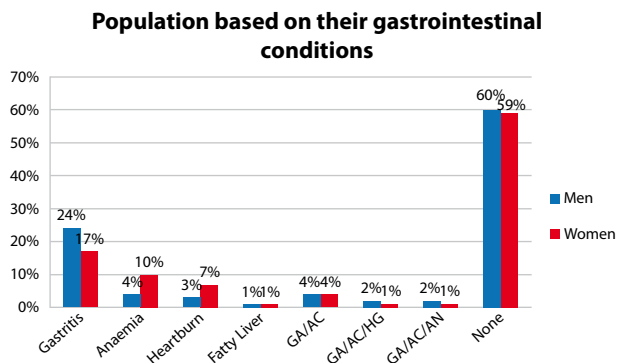


Source: Survey "celiac disease" applied to the study population.

Of 100% of the male population, 79% does not have long periods of pain on the left or right side of the abdomen radiating to the back or lower belly and 21% does not have long-term pain on the left or right side of the abdomen irradiated towards the back or lower belly.

Of 100% of the female population, 73% does not have long periods of pain on the left or right side of the abdomen radiating to the back or lower belly and 27% does not have long-term of pain on the left or right side of the abdomen radiated towards the back or lower belly.

Chart 5 shows the population's gastrointestinal conditions that are related to celiac disease.



Source: Survey "celiac disease" applied to the study population

Of 100% of the male population, 24% has gastritis, 3% has acidity, 4% has gastritis and acidity, 4% has anemia, 2% has gastritis, acidity and anaemia, 1% has gastritis and anaemia, 2% has gastritis, acidity and fatty liver and 1% have fatty liver, highlighting that 60% of the total male population does not have any of these conditions.

Of 100% of the total female population, 17% has gastritis, 4% has gastritis along with acidity, 7% has heartburn, 1% has fatty liver, 10% has anaemia, 1% has gastritis, acidity and fatty liver and 1% has gastritis, acidity and anaemia, stressing that 69% of the total female population does not have any of these ailments.

FINDINGS AND RECOMMENDATIONS

It was concluded that there is a very low rate of celiac disease in medicine students. Several of the students show -in their answers- some of the key symptoms for the diagnosis of this disease.

Although they can be manifestations of gluten intolerance or even some symptoms of a simple gastritis, through the surveys made to the students of Medicine by the present study, the results show that the celiac disease is a fact in health careers of San Francisco Xavier University.

At the same time, thanks to the achieved results, it can be stated that celiac disease is not considered and treated in a suitable way. Since it is an immunosuppressive disease, when not diagnosed in time, it triggers long complications; which can be seen in some surveyed individuals, who also have very insufficient knowledge about this disease.

For this reason, it is recommended that the relevant authorities foster health programs and government policies aimed at prevention as well as information campaigns on what celiac disease implies. Thus, the general population can take into account typical symptoms of the disease which are usually mistaken for common gastrointestinal diseases, in order to diagnose it in time.

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