

General Anxiety Disorders among Celiac Disease Patients in Aseer Region of Saudi Arabia

Ahmed A. Awwadh^{1*}, Noof Mofareh Alamri¹, Reem Ali Alqahtany¹, Fares Hamdi M Alhamd¹, Amjad Ahmed Medawi¹, Saeed Mohammed Asiri¹, Khalid Abdullah A Almalwi¹, Mohammad Saad Alshomrani¹, Mohammed Saeed Alqahtani¹, Javed Iqbal Wani²

¹MBBS, Internal Medicine Department, College of Medicine, King Khalid University, Abha, Saudi Arabia.

²MD, Associated Professor,

Internal Medicine Department, College of Medicine, King Khalid University, Abha, Saudi Arabia.

ABSTRACT

Background: To evaluate the association between celiac disease and specific anxiety and depressive disorders and to identify potential common Pathogenetic links and know to what extend celiac can effect on the life of people who suffer from it and knowing the anxiety disorders for them.

Methods: 142 cases and 15 variables will be used by SPSS version 19 to know the effect of anxiety on the life of patients.

Results: In the sample 80% of people who suffered from celiac are men, 45.1% of them are under 23 years, 55% of them are single, 93.7% of them are Saudi, 35.9% of them have a bachelor degree, 40.8% of them doesn't work, 53.5% of them their monthly income less than 3000, 54% of them live in the middle and, 53% of them get a good level of GAD score.

Conclusions: General Anxiety Disorders among celiac Disease Patients in the sample is moderate level for in average.

Keywords: Celiac Disease; Anxiety; GAD; SPSS; Saudi Arabia.

*Correspondence to:

Ahmed A. Awwadh, MBBS,
Internal Medicine Department,
College of Medicine,
King Khalid University,
Abha, Saudi Arabia.

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INTRODUCTION

Celiac disease is an immune disorder of the intestine caused in genetically susceptible individuals by gluten ingestion. Withdrawal of gluten from the diet completely reverses intestinal mucosa damage. Diagnosis is often made in adulthood, in patients with a long history of disease that may be misdiagnosed for years. A number of alterations—psychic symptoms and possibly related biological abnormalities—have been reported to exist before diagnosis. Once celiac disease is diagnosed, a gluten free diet must be initiated. The dietary restrictions may be hard to accept by adolescent and adult patients in particular if they have an intense working and social life. Therefore, adult celiac patients often claim a poor quality of life. Depressive symptoms are, for example, common in patients on a gluten-free diet and seem not to be related only to dietary restrictions, as they are independent of duration and compliance to the diet. As for other diseases, caring for adult celiac patients by physicians requires the knowledge of all the factors that may contribute to improving the general well-being and quality of life of a celiac patient.¹ Celiac disease presents as a malabsorption syndrome, resulting in failure to thrive in children and weight loss and devastating diarrhea in adults.² It is an increasingly prevalent disorder.³ Anxiety and depression represent a common feature in patients affected by

gastrointestinal diseases In some cases as in patients with functional gastrointestinal disorders, anxiety and depression are present particularly as a personality trait and they seem to play a main role in the genesis and / or the perception of symptoms. Recent studies showed that in these subjects, medical consultation is necessary because of the 'healthcare seeking behavior strictly related to the anxious trait, more than to the organic symptoms. In this case, the socioeconomic impact resulting from consultations with several gastroenterologists and from undergoing clinical examinations and consumption of drugs, is very high. On the other hand, few information are at present available about anxiety and depression in patients in whom an organic cause for their symptoms has been found. In these cases, anxiety and / or depression could be present mainly in the 'state' and / or 'current' form, reactive to the symptoms, to the long-term diseases, to long-term therapies and dietary restrictions, to the necessity of frequent medical control and to the reduction of the quality of life and of general well-being. However, at present, few data about the prevalence of state and trait form of anxiety and of current depression are available in large sample of patients affected by gastrointestinal disorders. In addition, in these patients, the role played by affective disorders is still discussed.

Aim of this study was to evaluate the presence of state anxiety, trait anxiety and current depression inpatients affected by gastrointestinal diseases, referred consecutively to an Internal Medicine outpatient setting for several consecutive years.⁴

METHOD

All CD patients completed an original questionnaire (GAD-7), aimed to evaluate different aspects of the perceived image and knowledge of the disease. The items of the questionnaire were chosen on the basis of a two-year cooperative experience between gastroenterologists and psychiatrists in management of celiac patients. The general anxiety survey was developed as a

mail-out questionnaire. We depended on sample consists of 142 observations and 32 variables. Data were analyzed using SPSS v19 for Windows Logic checks were performed using cross-tabulations for key variables. The proportion of respondents choosing different options was calculated for each question. Where relevant, for discrete variables were performed when comparing two groups. Analytical descriptive method was used to achieve the objective of the study by depending on descriptive statistics and cross tables, in addition to the most important graphs.

Table 1 showed the questions that we used it to calculate the GAD score.

Tab 1: GAD score

	During the past two weeks How many times have you bothered the following problems?			
	Never	Some of Days	More Than Half of Days	Every Day
Feeling angry, anxious or irritable	0	1	2	3
The inability to end or control anxiety	0	1	2	3
Excessive anxiety over different things	0	1	2	3
Difficulty relaxing	0	1	2	3
The intensity of the disturbance to the degree of difficulty staying calm	0	1	2	3
Speed in agitation	0	1	2	3
Feeling scared as if something terrible is happening	0	1	2	3

RESULTS

1. Descriptive Statistics

80% of people who suffer from celiac in the sample are females and, 20% only of them are males. The most suffer from celiac is category "under 23", it means that adults and children are the most people who suffer from celiac. The least suffer from celiac is category "47 and older". The most suffer from celiac is single people and the least suffer from celiac is divorced people. The most suffer from celiac is people who have a bachelor degree since they are 35.9% of the sample.

The most suffer from celiac is people who don't work since they represent the highest percentage and, the student category also suffers from celiac since they represent 39%.

Figure 1 showed that 53.5% of people who suffer from celiac have monthly income less than 3000 and, people who have monthly

income more than 10000 are the least suffer category from celiac since they are 12% of the sample.

Figure 2 showed that 53.52% of people have a good GAD score of celiac patients and 20.42% of them have a bad GAD.

Figure 3 showed that 50.7% of people suffered from celiac their duration of disease is from year to 6 years, 6.3% of them suffered 19 years and more years from it. 57 of people suffered from celiac their duration of GFD is from year to 6 years, 3.5% of them their duration is 19 years and more years from it. 49.3% of people who suffered from celiac their weight range between 48-87K and, 41.5% of people who their weight less than 48K suffered from celiac. 57.7% of people who suffered from celiac their height 152 and over, 38.8% of people who their height range between 119-151 suffered from celiac.

Fig 1: Monthly income of celiac patients in the sample

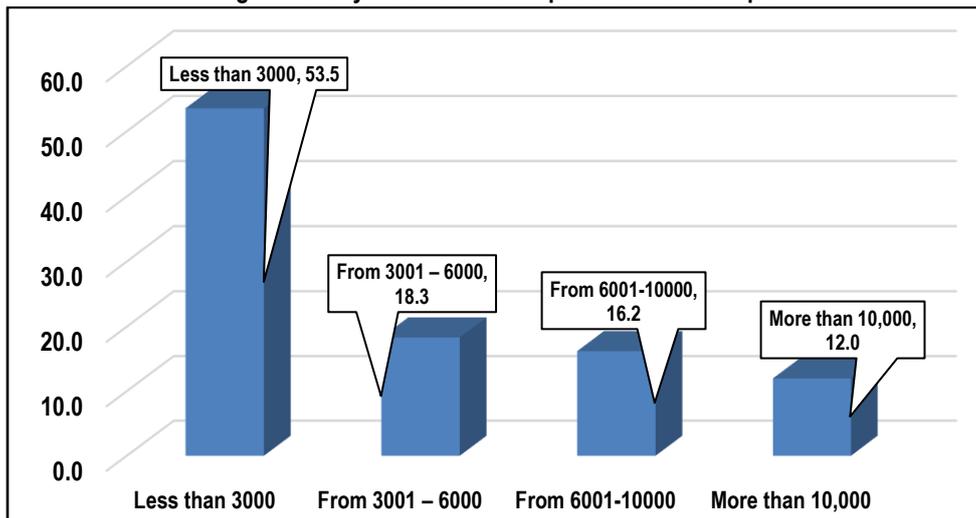


Fig 2: GAD score of celiac patients in the sample

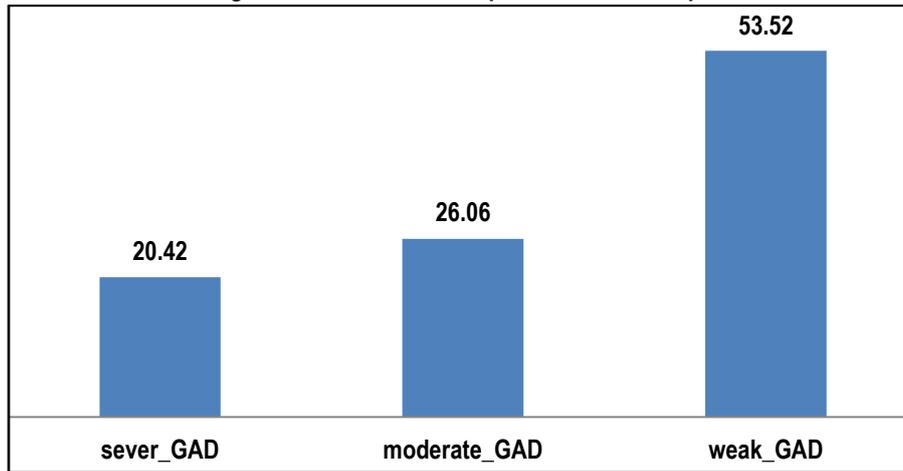


Fig 3: The duration of celiac disease

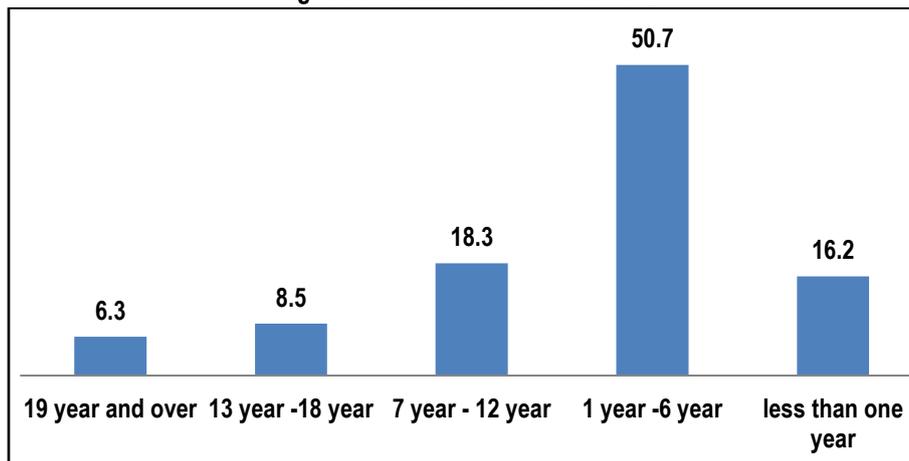


Table 2: The results of chi-2 test for all variables & GAD

Variable	P-value	Decision
Age	>0.05	Accept H ₀
Gender	<0.05	Reject H ₀
Work	>0.05	Accept H ₀
Marital Status	>0.05	Accept H ₀
Educational Level	>0.05	Accept H ₀
Monthly Income	>0.05	Accept H ₀
The Duration Of Disease	>0.05	Accept H ₀
The Duration Of GFD	>0.05	Accept H ₀

H₀: there is no significant relationship

H₁: there is a significant relationship

Table 3: Chi-Square Tests

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.369 ^a	2	.001
Likelihood Ratio	19.177	2	.000
Linear-by-Linear Association	1.993	1	.158
N of Valid Cases	142		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.92.

2. The Relationship between GAD Score and Each Variable

According to the table 2 and the hypothesis we will accept H₀ for all variables except "gender" variable we will reject it so, there is a significant relationship between "GAD" & "gender" at significant level = 0.05. Table 3 showed that the anxiety score is different

between males and females.

3. The General Mean of GAD Score

After calculating the general mean for all cases we found it = 1.271629779. It means that there is a moderate GAD level for people who suffered from celiac in average.

DISCUSSION

Celiac disease is precipitated by ingestion of the protein gliadin, a component of wheat gluten, and usually resolves on its withdrawal.⁵ Among patients, 1379 (84.1%) showed state anxiety, 1098 (67%) showed trait anxiety and 442 (27%) showed current depression. The number of gastrointestinal diseases was directly correlated to state anxiety ($p < 0.001$) and trait anxiety ($p = 0.04$). Females showed higher levels of anxiety and depression than males ($p < 0.001$). State anxiety was related to food allergies ($p < 0.001$), small intestinal bacterial overgrowth (SIBO) ($p = 0.001$), Hp infection ($p = 0.01$) and ulcerative colitis in active phase ($p = 0.03$). Trait anxiety was related to irritable bowel syndrome (IBS) ($p < 0.001$), Helicobacter pylori (Hp) infection ($p = 0.001$), food allergies ($p = 0.001$) and SIBO ($p = 0.001$). Current depression was related to IBS ($p < 0.001$) and coeliac disease ($p = 0.01$), SIBO ($p = 0.02$). A predicted probability of 0.77 ± 0.16 to have state anxiety, of 0.66 ± 0.12 to have trait anxiety and of 0.39 ± 0.14 to have depression was found in these patients.⁽⁴⁾ Eighteen studies on depression and eleven studies on anxiety in adult celiac disease met selection criteria. They show that depression is reliably more common and/or more severe in adults with celiac disease than in healthy adults (overall meta-analysis effect size: 0.97). The fail-safe margin of unpublished reports that would be required to negate the finding exceeds 8000. Adults with celiac disease do not, however, differ reliably in terms of depression from adults with other physical illnesses, nor do they differ reliably from healthy adults or adults with other physical illnesses in terms of anxiety. By comparing the results of this study with our study we will find the same thing since, adults is the most suffered category from anxiety. this study discussed this problem by meta-analysis and the results showed that there are comparisons between adults with coeliac disease (CD), healthy controls (HC), and adults with a disease other (OD) but no reliable difference in anxiety was found between adult celiac patients and either healthy adults or adults with other medical illness so, the most people suffered from celiac are adults. By comparing that with our study it is definitely agree with it. Anxiety between healthy adults and adult celiac patients, and that there is no reliable difference in anxiety between adult celiac patients and adults with another medical illness. The first hypothesis was rejected because it proved to be false, whereas the three other null hypotheses were upheld. Thus, the risk and/or severity of depression turned out to be reliably greater in adult celiac patients than in healthy adults, whereas no reliable difference in depression was found between adults with celiac disease and those with other medical disorders. Similarly, no reliable difference in anxiety was found between adult celiac patients and either healthy adults or adults with other medical illness. Relatively little is currently known concerning causal mechanisms for depression in adult celiac disease. Because celiac disease consists of adverse physical symptoms including diarrhea, Streator rhea, abdominal pain, and indigestion, it can severely disrupt daily life and produce illness behavior. Once diagnosed, people with celiac disease must avoid foods containing three of the world's most common grains, namely wheat, rye, and barley, for the rest of their life depression in adult celiac disease may then represent a non-specific disorder precipitated by adverse physical symptoms along with persona and social limitations imposed by the chronic incurable disease. Support for the notion of non specific causality comes from the

fact that removal of gluten, the specific pathogen celiac disease, from the diet often fails to alleviate psychic distress. Others have speculated that immunological aspects of celiac disease may also contribute to physical and psychic distress and that low levels of essential nutrients, because of damaged intestinal epithelium in celiac disease, may produce depression. It is hoped that further studies will determine how best to alleviate depression in adult celiac disease.⁶ In Pakistan majority of the patients with malabsorption belong to age group of twenty one to thirty years with males more frequently affected than females.⁷

CONCLUSIONS

Depression is common in adult celiac disease and resembles the condition in other physical illnesses. We view the findings as support for the notion that non-specific mechanisms mediate emotional disorders in adult celiac disease.

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