



## DIFFUSE ANXIETY SYNDROME IN THOSE WITH STOMACH ULCERS

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**Abstract:** To examine the prevalence of GAD among people with peptic ulcer disease patients, as well as the sociodemographic differences and risk factors between peptic ulcer disease patients with and without GAD. This research was conducted in Samawa City's Al-Hussein Teaching Hospital. In the examination department, 50 PUD patients (study group) were assessed. A total of 30 individuals (the control group) are chosen at random and matched to the study group's age, gender, educational level, and marital status. In both groups, the diagnosis of GAD was assessed using the right questionnaires. Patients with PUD had considerably higher GAD levels. people with PUD are more likely to have a generalized anxiety disorder, hence these people should have it evaluated. Peptic ulcer condition is often known as GAD (general anxiety disorder). ICD stands for the International Classification of Disease.

**Keywords:** Diffuse Anxiety Syndrome, Stomach Ulcers, Patients.

### 1. Introduction

A variety of organic etiologies are associated with peptic ulcer disease, and the most closely connected of these are infection with *Helicobacter pylori* and usage of non-steroidal anti-inflammatory drugs. Between 5% and 20% of patients with gastric or duodenal ulcer, however, lack a distinguishable organic etiology [1]. In these patients particularly and in all ulcer patients generally, psychosocial factors may play a big role [2]. Traditionally, PUD has been considered to be a psychosomatic disease. A recent evidence in 2013 supported that there is a link between mental disorder and the onset of self-reported peptic ulcer [3]. Several psychological factors associated with PUD, such as personality, stress, and addiction, this association had mentioned in many previous literature [4], [5]. In recent years there has been raising interest in the relationship between chronic peptic ulcer disease and mood and anxiety disorders [1].

Evidence of this relationship comes from three main sources. First, data from clinical studies propose greater rates of anxiety and neurotic personality traits among adult patients with PUD. Second, studies that have included patients with anxiety and mood disorders have found a worthy high rate of gastrointestinal problems than the general population. Third, community-based studies have shown a link between PUD and mood disorders among adults [6]–[8]. However, attempts to explain ulcers due to *H. pylori* and usage of no steroidal anti-inflammatory drugs (NSAIDs) as solo etiological factors are likely to fade. The area is therefore open for other factors working in conjugation with *H. pylori* or

causing ulcers through alternate pathways. Given the widespread occurrence of infection with *H. pylori* in first and third-world country populations, only a very little number of citizens actually develop duodenal ulcers.

The epidemiological, clinical, and genetic evidence strongly suggest that host factors, especially the influence of exertion, may be crucial in deciding who develops a duodenal ulcer [9]. [10] suggested that only four factors are now believed the most important for the evolution of peptic ulcer discovery, i.e., *H. pylori* infection, gastric acid, NSAID administration, and mental and physical stress. Michael [2] pointed out the place of psychosocial factors in PUD: Beyond *H. pylori* and NSAID. The aim is to study the prevalence of GAD among patients of peptic ulcer disease and to study the patients of peptic ulcer disease with GAD in comparison to patients of peptic ulcer disease without GAD on some sociodemographic variables and some risk factors including age, duration of PUD, gender, marital status, educational level, family history of PUD, smoking, alcohol habit and use of NSAID.

## 2. Materials and Methods

This study was carried out from 1-11-2018 to 30-9-2019. The adult patients with PUD were selected randomly by using a random numbers table. The patients were attendees of the surgical and medical clinic in consultation department in Al-Hussain teaching hospital in Samawa City. A detailed history and physical examination was carried out in these patients by the doctor concerned. the diagnosis was confirmed by a general surgeon who performed Biochemical, ultrasonographic, and endoscopic examinations of the patients. This study was divided into two groups, group A (study group) consisting of 50 patients and Group B (control group) consisting of companions accompanying the patients in the consultation department. The study group was further subdivided into two subgroups, i.e., those with and without GAD. only 30 subjects (control group) matched our study group in age, gender, education, and marital status, and have no history of psychiatric or gastroenterological disorder or any current symptoms. Informed consent was obtained from all participants after a full explanation of the details of the study to them. Both groups have been assessed by a senior psychiatrist for diagnosis of GAD depends on The ICD-10 Diagnostic criteria of GAD [11], and all participants were asked to fill in a questionnaire that includes:

1 - Hamilton Anxiety Scale (HAM-A) [12].

2 - Personal biodata questionnaire including items or variables to study the sociodemographic profile of the patients is done. The variables included age, marital status, and patient's education, residence, and personal attributes like alcohol intake, smoking, and drug intake.

The data collected were subjected to statistical analysis, chi-square and t-tests were applied to test the statistical significance. The confidence interval was set at 95% while P- value of less than 0.05 was considered significant in the statistical view.

## 3. Results and Discussion

Table (1) shows Scores on Hamilton's rating scale for anxiety. We found that 32 persons (64%) out of 50 (study group) have GAD, while 7 persons (23.33) out of 30 (control group) have GAD. The mean score of Hamilton's rating scale for anxiety of the study group was ( $14.96 \pm 7.43$ ) significantly higher ( $p < 0.01$ ) than control group ( $6.60 \pm 3.28$ ).

**Table 1. Scores Hamilton's rating scales for anxiety**

Hamilton score	Study group A		Control group B	
	NO=50	%	NO=30	%
0-13	18	36	23	36.66
14-17	9	18	6	20
18-24	14	28	1	3.33
25 & over	9	18	0	0.0
total	50		30	
Mean	$14.96 \pm 7.4339$		$6.60 \pm 3.2863$	

T: 5.817, P: 0.000, d.f: 78, S: Significant.

Table (2) shows the characteristics of PUD patients. A significantly higher number of patients with GAD, i.e., 43.75%, were diagnosed as a case of PUD at the age of 30-44 years, while a higher number of patients

without GAD, I.e., 72.22% were in the age of 15-29 years. Further, a significantly higher ( $P<0.001$ ) number of patients (50%) with GAD had longer duration of acid peptic disease illness, i.e., >10 years compared to 22.22% in patients without GAD. A significantly higher number of patients with GAD, were female, I.e., 22 (68.75%) out of 32 patients. While higher number of patients without GAD, i.e. 11 (61.11%) were male. A significantly higher number of patients with GAD, were single, I.e., 17 (73.91%), while higher number of patients without GAD, i.e 14 (77.77%) were married. A higher number of patients with GAD, were graduate, I.e. 14(43.75%), while the number of patients without GAD, who are graduate is 7(38.88%), the difference was not significant. 17 (53.12)% patients with GAD. Were from rural area, while 9 (50.0%) patients without GAD were from rural area. There was no significant difference. Further, 46.87% of patients with GAD had significantly ( $P<0.05$ ) stronger family history of acid peptic disease compared to 11.11% in patients without GAD.

**Table 2. the characteristics of PUD patients**

Patients Characteristic	PUD patients				Level of significance	
Age of diagnosis of PUD (in years)	With GAD		Without GAD			
	N=32	%	N=18	%		
15-29	11	34.37%	13	72.22%	x2= 6.665 df2=	p.v.=0.035 S
30-44	14	43.37%	3	16.66%		
45-64	7	21.87%	2	11.11%		
Duration of PUD (in years)						
0-5	5	15.62%	12	66.66%	x2= 13.447 df2=	p.v.= 0.0050 s
5-10	11	34.37%	2	11.11%		
>10	16	50%	4	22.22%		
Male	10	31.25%	11	61.11%	x2= 4.217 df1	p.v.=0.040 s
Female	22	68.75%	7	38.88%		
Married	15	46.87%	14	77.77%	x2=4.516 df1	p.v.=0.033 s
Single	17	73.91%	4	22.23%		
Less than higher school	8	34.78%	4	22.22%		
Higher school	10	31.25%	7	38.88%	x2= 0.3 df2	p.v.=0.860 N.S
Collage	14	43.75%	7	38.88		
Urban	15	46.87%	9	50%		
Rural	17	53.12%	9	50%	x2=0.045 df1	p.v.=0.832 N.S
Family history of PUD						
With family history	15	46.87%	2	11.11%		
Without family history	17	53.12%	16	88.88%	x2= 6.566 df1	p.v.=0.010 S

df : degree of freedom, p.v: p . value, S: significant N.S: non-significant.

In Table 1. the anxiety symptoms were found significantly more in study group patients than in control group subjects. Nevertheless this finding was harmonious with finding of Renee et analyzed the data drawn from the national comorbidity survey, representative household survey of the adult population of the United States [1], the result is also similar to that of [13]. who found a close relation between PUD and mental health problems such as severe anxiety[13]. Although the pathway of the associations between GAD and PUD cannot be known from these data alone, the results suggest that the anxiety disorders may be risk factors for developing ulcer. The finding of table one, if supported by other studies, should increase awareness that patients seeking help for peptic ulcer disease may be at increased risk for development of generalized anxiety disorder. So this comorbidity between PUD and GAD should be assessed, some authors wrote that treatment is more effective if it covers both somatic and psychological aspects of PUD. Short-term psychotherapy of patients with PUD may be given in primary care and to be supervised by psychiatrists in combination with medical treatment [14].

In addition, medications that treat generalized anxiety disorder, such as antidepressants, may have power for treating peptic ulcer disease, "perhaps in combination with medications that eradicate *Helicobacter pylori*. Anxiety can potentially increase gastric acid secretion, predisposing one to develop ulcer [15]. Thus, efforts at treating anxiety disorders and/or reducing stress levels may play a role in reducing the risk of developing ulcer.

Table 2. showed a significantly higher number of patients with GAD, i.e., 43.75%, were diagnosed as a case of acid peptic disease in the age of 30-44 years compared to 16.66% of patients without GAD. The mechanism

behind this link is unknown, but the researchers suggested four scenarios. One, the tension of generalized anxiety disorder may cause peptic ulceration. Two, having peptic ulcer disease may progress to an anxiety disorder. Four, individuals with generalized anxiety disorder over-record ulcer symptoms, according to the study [1]. Regarding gender, the table showed that most of the patients with GAD were female, this finding is consistent with that of [16]. in their study, the women were more prone to generalized anxiety disorder [16]. and also to that of [17]. who studied major anxiety disorders in Iran [17] and that of the German population, women are found to be more anxious than men [18] the result is also consistent with to result of a review for anxiety disorders in Arabic-speaking countries, most studies showed higher prevalence rates in woman than in men [18]. Regarding marital status, a high percentage of patients with GAD were single.

Actually, marriage (versus never married) was associated with a reduced risk of the first onset of most mental disorders in both genders [19]. Individuals with GAD experience impairment in various aspects of their lives, including relationships with relatives, if someone lives with GAD, he may be prone to marital distress and be at greater risk of divorce. More so, problems in his/her relationships could give rise to trouble in terms of treatment, those with impairments in these areas generally don't respond as well to therapy over the long term, so we should consider the marital status and marital expenses of PUD patients with GAD. Regarding the family history of PUD about 46.7% of patients with GAD showed positive history of PUD, while only 11% of patients without GAD showed positive family history of PUD.

This result may interpret the genetic link between the disorders, similarly, good and Stein found that generalized anxiety disorder was associated with a considerably increased risk of self-reported peptic ulcer disease. They also found that the more anxiety symptoms had been reported by the generalized anxiety victims, the more likely they reported peptic ulcer disease [1] this link may interpret a common genetic background, this link has been found by Christodoulou et al. [17] compared 34 male peptic ulcer patients to a group of 37 healthy controls. It was observed that more than 50% of patients had at least one first-degree relative with peptic ulcer.

#### 4. Conclusion

There is a significant propagation between peptic ulcer disease and GAD. An important aspect for the gastroenterologist would be the understanding of the common comorbidity of PUD and GAD and the awareness of this quite common comorbidity, in order to improve the outcomes of both diseases. A multidisciplinary approach for the PUD patient would help improve the outcomes of the disease.

#### Supplementary Materials:

No Supplementary Materials.

#### Author Contributions:

A. A. Sahib and K. O. Hussein; methodology, writing—original draft preparation, D. M. Hameed and E. Salih; writing—review and editing; H. Kareem part the lab work. All authors have read and agreed to the published version of the manuscript.

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The authors declare no conflict of interest.

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