Generalized anxiety disorder in peptic ulcer patients

Adil J. Abdul Sahib¹, Kasim O.Hussein², Dergham M. Hameed³, Emad Salih¹, Haneen Kareem¹

¹Al-Hussien Teaching Hospital, Al-Muthanna, Iraq.
²College of Medicine, Al-Muthanna University, Iraq.
³College of Nursing, Al-Muthanna University, Iraq.

Abstract:
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 those without GAD on some socio-demographic variables and risk factors. This study has been carried out in Al-Hussein teaching hospital in Samawa city. Fifty patients (study group) with PUD in consultation department were evaluated. 30 subjects (control group) are randomly selected, and they are matched the study group in age, gender, education and marital status. The diagnosis of GAD was evaluated by appropriate questionnaires in both groups. The GAD was significantly high in Patients with PUD. Generalized anxiety disorder is prominent in PUD Patients, and should be assessed in those patients. GAD: General Anxiety Disorder, PUD: Peptic ulcer disease. ICD: International Classification of Disease.

Keywords: peptic ulcer disease, generalized anxiety disorder, prevalence

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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 etiology¹. In these patients particularly and in all ulcer patients generally, psychosocial factors may play a big role². 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 ulcer³. Several psychological factors associated with PUD, such as personality, stress, and addiction, this association had mentioned in many previous literature⁴,⁵. In recent years there has been raising interest in the relationship between chronic peptic ulcer disease and mood and anxiety disorders⁶. 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 showed a link between PUD and mood disorders among adults⁷,⁸,⁹. However, attempts to explain ulcer 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 ulcer¹⁰. Chiba¹¹ suggested that only four factors are now believed the most important for the evolution of peptic ulcers discovery, i.e., H. pylori infection, gastric acid, NSAID administration, mental and physical stress. Michael¹² pointed out the place of psychosocial factors in PUD: Beyond H. pylori and NSAID. The aim 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 socio-demographic 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 NSAIDs.
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 attenders 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 to the the patients. This study was divided into two groups, group A (study group) consisting of 50 patients and group B (control group) consisted 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 full explanation of the details of the study to them. Both groups have been assessed by senior psychiatrist for diagnosis of GAD depends on The ICD-10 Diagnostic criteria of GAD\textsuperscript{13}, and all participants were asked to fill in a questionnaire which includes:
1 - Hamilton Anxiety Scale (HAM-A)\textsuperscript{14}.
2 - Personal bio data questionnaire included items or variables to study the sociodemographic profile of the patients are done. The variables included age, marital status, and patients' education, residence and personal attributes like alcohol intake, smoking, and drug intake.

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

Results
Table 1. shows Scores on Hamilton's rating scale for anxiety. We found that 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 study group was $14.96 \pm 7.43$ significantly higher ($p<0.01$) than control group ($6.60 \pm 3.28$).

<table>
<thead>
<tr>
<th>Hamilton score</th>
<th>Study group A</th>
<th>Control group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO=50</td>
<td>%</td>
</tr>
<tr>
<td>0-13</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>14-17</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>18-24</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>25 &amp; over</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>total</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>$14.96 \pm 7.43$</td>
<td></td>
</tr>
</tbody>
</table>

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 in the age of 30-44 years, while 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>
<thead>
<tr>
<th>Patients Characteristic</th>
<th>PUD patients</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of diagnosis of PUD</td>
<td>With GAD</td>
<td>Without GAD</td>
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Discussion

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, the result is also similar to that of Levenstein S et al. who found a close relation between PUD and mental health problems such as severe anxiety. 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. 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. 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. Regarding the gender, the table showed that most of patients with GAD were female, this finding is consistent with that of Leary E et al. in their study, the women were more prone to generalized anxiety disorder and also to that of Ahmad Hajebi et al. who studied major anxiety disorders in Iran and to that of the German population, women are found to be more anxious than men the result is also consistent to result of a review for anxiety disorders in Arabic speaking countries, most studies showed higher prevalence rates in woman than in men. Regarding the marital status ,the high percentage of patients with GAD were single. Actually the marriage (versus never married) was associated with reduced risk of first onset of most mental disorders in both groups.
Individuals with GAD experience impairment in various aspects of their lives, including relationships with relative. If someone live 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 interpretive the genetic link between the disorders, similarly Goodwin 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. This link has been found by Christodoulou et al. who 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.

CONCLUSION:
There is a significant propagation between the 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 of the PUD patient would help improve the outcomes of disease.

REFERENCES:
2. MICHAEL PJ.. THE ROLE OF PSYCHOSOCIAL FACTORS IN PEPTIC ULCER DISEASE: BEYOND HELICOBACTER PYLORI AND NSAIDS. MAY 2006. HTTPS://WWW.RESEARCHGATE.NET.