

## PSYCHIATRIC DISORDERS IN NON-ULCER DYSPEPSIA

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### SUMMARY

*Systematic studies of psychiatric disorders in non-ulcer dyspepsia are rare. The aim of the present study was to find out the nature and prevalence of psychiatric morbidity in non-ulcer dyspepsia. Thirty three patients with non-ulcer dyspepsia and thirty with duodenal ulcer were assessed for psychiatric morbidity with the help of the regular version of the SADS, and diagnosed according to DSM-III-R criteria. Non-ulcer dyspepsia was defined precisely and investigators who made the psychiatric diagnosis were blind to the gastroenterological diagnosis. In the non-ulcer dyspepsia group, 69.7% of patients had psychiatric morbidity, compared to 26.7% in the ulcer group. The difference between the two groups in the frequency of psychiatric morbidity was statistically significant. Dysthymic disorder (39.4%) was the most frequent psychiatric disorder in the non-ulcer dyspepsia group.*

### INTRODUCTION

Though dyspepsia, which is a common symptom among the general population (Jones & Lydeard, 1989), can be due to serious illness like peptic ulceration, gastric carcinoma etc., in majority of patients no organic pathology can be identified (Harvey et al, 1983; Tibblin, 1985). To denote this group of dyspeptic patients currently the term non-ulcer dyspepsia is used. Non-ulcer dyspepsia is a common disorder (Krag, 1982) and though essentially benign, produces significant occupational dysfunction and economic loss (Nyren-O et al, 1985). However, the term non-ulcer dyspepsia currently lacks a generally accepted definition (Nyren-O, 1987) and a variety of symptoms like abdominal or retrosternal pain, discomfort, heartburn, nausea, vomiting or other symptoms referable to the proximal alimentary tract have been included under it. (Colin-Jones et al, 1988). Thus defined, disorders like gastroesophageal reflux and the irritable bowel syndrome can broaden the concept of non-ulcer dyspepsia and make the group more heterogenous (Talley & Phillips, 1988). Though disordered motility of upper gastrointestinal tract (Malagelada & Stanghellini, 1985) and *Campylobacter pylori* infection (Rokkas et al, 1987) have been found to be associated with non-ulcer dyspepsia, the role of these agents in the aetiology and pathogenesis of non-ulcer dyspepsia have not been proven (Talley & Phillips, 1988; Mowis, 1991).

Emotional factors are known to influence gut functions through alteration in secretion, motility and vascularity (Wolf, 1981). However, in spite of the absence of demonstrable organic aetiology, investigations on the role of psychological factors in non-ulcer dyspepsia are rare. Available studies indicate that there are significant difference in anxiety and depression between patients having non-ulcer dyspepsia and the general population (Talley et al, 1985). Dyspeptic symptoms are common in psychiatric illnesses such as depressive and anxiety disorders. As in the case of atypical chest pain, where treatment of overt psychiatric disorders reduce the morbidity and occupational dysfunction (Beitman et al, 1988; Mayou, 1989), patients with non-ulcer dyspepsia may also benefit by the recognition and treatment of psychiatric disorders; but surprisingly, systematic studies of psychiatric disorders in non-ulcer dyspepsia are rare. In fact, through a literature

search using MEDLINE we were able to come across only a single study by Magni et al (1987), which reported the prevalence of psychiatric disorders in non-ulcer dyspepsia. In that study, though the investigators used modern criteria (DSM-III) for diagnosis, they were not blind to the gastroenterological diagnosis and their control group of organic dyspepsia was not homogenous. Consequently, the aim of the present study was to find out the prevalence and nature of psychiatric morbidity in non-ulcer dyspepsia using more refined methodology.

### MATERIAL AND METHODS

The patients for this study were selected randomly from among those attending the gastroenterology outpatient department of Kasturba Medical College, Manipal. All patients were initially screened by a gastroenterologist (B.V.T). Those who had dyspepsia of more than 4 weeks were considered for the study. To define dyspepsia precisely, the definition of Talley et al (1985) was used. Dyspepsia was defined as any pain, nausea or discomfort referable to the upper alimentary tract, intermittent or continuous, present for more than 4 weeks, not precipitated by exercise and not relieved by rest, excluding patients with jaundice, dysphagia and bleeding. The nature of the study was explained to the patients and informed consent obtained. After a detailed history and physical examination using a proforma devised for this purpose, all patients underwent upper gastrointestinal endoscopy. No sedative was used as premedication before endoscopy.

The following exclusion criteria were applied.

1. Evidence of any systemic disorder other than peptic ulcer (diabetes mellitus, hypertension, liver disorders etc.)
2. History and findings suggestive of gastroesophageal reflux.
3. History and findings suggestive of irritable bowel syndrome as per Manning's (1978) criteria.
4. Dyspepsia of less than 4 weeks duration.
5. Patients below the age of eighteen or more than 60 years old.

Based on the endoscopy findings, patients were divided into two groups; one group of patients having duodenal ulcer and another group of non-ulcer dyspepsia in whom no pathology could be detected. Exclusion criteria were applied to both the groups. All the patients

selected for the study were assessed by a psychiatrist (P.J.A. or G.R.R) on the same day after endoscopy. These two investigators were earlier jointly involved in a study of psychiatric disorders in peptic ulcer disease. Also, prior to the present study we rated 15 gastroenterology out-patients with dyspepsia jointly for psychiatric morbidity using DSM-III-R criteria and had 100% diagnostic concordance. These two investigators were blind to the gastroenterology diagnosis during the entire period of study. Patients were interviewed with the help of regular version of the Schedule for Affective Disorders and Schizophrenia (SADS) and DSM-III-R diagnosis was made. Chi-square test was used to analyze results of categorical variables and Students t test for continuous variables.

**RESULTS**

Thirty three patients with non-ulcer dyspepsia and thirty patients with duodenal ulcer were studied. The age range of the non-ulcer dyspepsia group was 19-58, with a mean of 32.83 and SD of 8.46. The ulcer group had an age range of 20-60, with a mean of 33.9 and SD of 9.36. 63.6% of non-ulcer dyspepsia patients and 70% of duodenal ulcer patients were married. Males were predominant in both the groups, comprising 78.8% and 80% in non-ulcer dyspepsia and duodenal ulcer group respectively. The mean duration (SD) of dyspeptic symptoms were 16.96 (8.56) and 18.12 (9.2) months respectively in non-ulcer dyspepsia and duodenal ulcer groups. Thus, there were no significant differences between the two groups in age ( $t=0.47$ ,  $df=61$ , NS), marital status ( $X^2=0.29$ ,  $df=1$ , NS), gender ( $X^2=0.006$ ,  $df=1$ , NS) and the duration of dyspeptic symptoms ( $t=0.52$ ,  $df=61$ , NS).

The nature of psychiatric morbidity in both the groups are shown in Table 1. Twenty three (69.7%) patients in the

non-ulcer dyspepsia group suffered psychiatric morbidity as compared to 8 (26.7%) of duodenal ulcer patients. The difference between the frequency of psychiatric morbidity was highly significant ( $X^2=11.64$ ,  $df=1$ ,  $p<0.001$ ). Dysthymic disorder was the most frequent diagnosis in the non-ulcer dyspepsia group (39.4%) and anxiety disorders comprised 24.2% of psychiatric morbidity.

**DISCUSSION**

The concept of non-ulcer dyspepsia has evolved over time (Colin-Jones et al, 1988; Talley & Phillips, 1988; Mowis, 1991). In this study, by using a relatively narrow definition of dyspepsia and by excluding patients with other systemic disorders, gastroesophageal reflux and irritable bowel syndrome, we have made our sample of non-ulcer dyspepsia more homogenous. Our control group of patients with duodenal ulcer was also homogenous unlike the study of Magni et al (1987), where the control group consisted of patients with both hiatus hernia and gall stones.

Our findings show that psychiatric disorders are frequent in non-ulcer dyspepsia. The highly significant difference in psychiatric morbidity in our patients with non-ulcer dyspepsia as compared to duodenal ulcer, who were similar to the experimental group in age, gender marital status and duration of symptoms shows a specific association between non-ulcer dyspepsia and psychiatric disorders. Though psychiatric disorders have been found to be associated with chronic physical illness as responses to discomfort, the lower rate of psychopathology in duodenal ulcer argues against this hypothesis as the sole cause of high psychiatric morbidity in non-ulcer dyspepsia.

Our finding that 69.7% of patients with non-ulcer dyspepsia have psychiatric morbidity is comparable to the finding of Magni et al (1987), who in their sample of 30 patients with non-ulcer dyspepsia, reported a psychiatric morbidity of 86.7%. However, in their study, 73% of patients had anxiety disorders and only 6.6% had depressive disorders. They also found a significant difference between non-ulcer dyspepsia and organic dyspepsia in the frequency of psychiatric morbidity. In our study, the predominant psychiatric disorder was dysthymic disorder and anxiety disorders comprised only 24.2% of psychiatric illness.

Before generalizing from this study certain caveats should be considered. Our sample size, like those of Magni et al (1987) is relatively small. This is partly due to the narrow criteria used for diagnosis and the various exclusion criteria applied. In the present study, ultrasonography to rule out gall stones were not done on all patients. However, whenever gall bladder or pancreatic pathology was suspected clinically, necessary investigations including ultrasonography was done. Patients with biliary pain due to gall stones can usually be identified clinically (Talley & Phillips, 1988).

Also, it would be worthwhile to study psychiatric disorders in various sub-groups of non-ulcer dyspepsia,

Table 1  
DSM-III-R diagnosis for 33 patients with non-ulcer dyspepsia and 30 patients with duodenal ulcer

Diagnosis	Non-ulcer dyspepsia		Duodenal Ulcer	
	N	%	N	%
Dysthymic Disorder	13	39.4	2	6.7
Major Depression	1	3.0	-	-
Depressive Dis. N.O.S.	-	-	1	3.3
Adjustment Disorder with Depressed Mood	-	-	1	3.3
Cyclothymia	-	-	1	3.3
Gen Anxiety Disorder	4	12.1	1	3.3
Panic Disorder with Agoraphobia	2	6.1	1	3.3
Social Phobia	1	3.0	-	-
Anxiety Disorder N.O.S.	1	3.0	-	-
Alcohol Dependence	1	3.0	1	3.3
Histrionic Personality	1	3.0	-	-
Total	24	72.7	8	26.7

One patient in the non-ulcer dyspepsia group had more than one psychiatric disorder. Hence, the total number of psychiatric disorders are more than the number of patients with psychiatric disorders in the non-ulcer dyspepsia group.

such as those having *Helicobacter pylori* infection, motility disorders of upper gastrointestinal tract, gastroduodenitis and those in whom, even after extensive investigation, no cause for dyspepsia is detected. As there are no studies looking into this aspect, further studies in these areas are warranted. Similarly, to see whether the high psychiatric morbidity seen in hospital based studies are due to a selection bias, community based studies of psychiatric morbidity in non ulcer dyspepsia using a larger sample size are needed. It would also be worthwhile to study whether treatment of overt psychiatric disorders will decrease the morbidity and improve the quality of life in non-ulcer dyspepsia patients.

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