PSYCHOSOCIAL ASPECTS OF NON-ULCER DYSPEPSIA

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ABSTRACT

A group of 23 non-ulcer dyspepsia patients were compared with controls drawn from relatives of psychiatric outpatients. The level of hostility in both groups was high, but not significantly different. There was also no significant difference between the 2 groups on measures of extroversion, neuroticism, psychoticism and lie scores, but the ulcer group was significantly more depressed and more were diagnosed as suffering from a neurotic depression and generalized anxiety disorder.

Key Words: Non-ulcer dyspepsia, level of hostility, personality measures, depression, anxiety

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INTRODUCTION

'Dyspepsia' has been defined by Krag 1982 (1) as"a difficulty of digestion and includes a variety of persistent or episodic conditions of discomfort with either direct relation to the alimentary tract or a more undetermined relation to the abdominal region". Crean et al, 1982 (2) listed among the common causes,

1) Irritable bowel syndrome
2) Symptoms associated with formal psychiatric illness
3) Other non-organic dyspepsia

The term 'non-ulcer dyspepsia' often refers to a dyspepsia with upper alimentary symptoms (3) and excludes the irritable bowel syndrome as the latter is a condition of the lower alimentary tract. Thus 'non-ulcer dyspepsia' embraces the second and third causes of dyspepsia as postulated by Crean (2). In general, dyspepsia is considered to be of functional origin, as emotion is felt to play a part in the causation. Langebuddecke (4) in a review of the psychological aspects of the irritable bowel syndrome, for example, stated that the majority of the patients (about 70% – 100%) were diagnosed as suffering from a psychiatric illness. Personality studies also revealed that such patients were more neurotic, anxious, introverted, compulsive, conscientious, dependent, sensitive, guilty and unassertive. Thus it was often regarded as a psychosomatic illness (5), and stress was frequently related to the onset or exacerbation of this condition. Previous work in Singapore on the relationship between psychological problems and gastrointestinal diseases dealt with patients with proven duodenal ulcers (6), but no investigations of patients with dyspepsia have been carried out. This study thus seeks to assess the psychological characteristics of a group of Singapore patients suffering from 'non-ulcer dyspepsia', where the irritable bowel syndrome had been excluded by the history of abdominal pain plus either constipation or diarrhoea in the absence of physical findings that could suggest a cause for these symptoms (5). Non-ulcer dyspepsia is thus defined as a dyspepsia of psychological origin where peptic ulcer, oesophagitis and gastric malignancy has been excluded by endoscopy, and obvious irritable bowel syndrome and gastro oesophageal reflux by history.

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METHOD

Twenty-three non-ulcer dyspepsia patients who were found on endoscopy not to have peptic ulcer, oesophagitis and gastric malignancy and who did not have a history suggestive of irritable bowel syndrome or gastro-oesophageal reflux, were assesed using the Hostility and Direction of Hostility Questionnaire (7), the Eysenck's Personality Questionnaire (8) and the Zung Self Rating Scale of Depression (9). The presence and severity of ongoing life difficulties were also determined.

A comparison group of controls, comprising relatives of psychiatric outpatients were matched for age and sex. Both subjects and controls had to be literate in English or Chinese and had to have attained a secondary school education.

RESULTS

There were 15 females and 8 males. Their ages ranged from 18 to 45 with a mean age of 29.7 years.

1. Hostility and Direction of Hostlity

Table 1
*HOSTILITY AND DIRECTION OF HOSTILITY SCORES

*	AH	CO	PH	SC	G	Hos.	Direct.
Subjects							
Mean	3.60	5.26	2.60	4.17	2.08	17.73	−1.04
SD	1.77	2.41	1.94	2.67	1.34	7.26	5.11
Controls							
Mean	3.17	5.47	2.30	4.30	2.56	17.82	0.21
SD	1.37	1.56	1.89	2.05	1.40	5.10	4.13
P (t test)	NS	NS	NS	NS	NS	NS	NS

AH = Urge to act out hostility
CO = Criticism of others
PH = Paranoid hostility
SC = Self criticism
G = Guilt
Hos = Hostility
Direct. = Direction of hostility

There was no significant difference between the 2 groups in the scores on the Hostility and Direction of Hostility Scale.

The experimental group was more extropunitive in their hostility and the controls more intropunitive but the difference was not significant.

2. Extroversion, Neuroticism and Psychoticism

There was also no significant difference between the 2 groups on scores of extroversion, neuroticism, psychoticism and lie scores, but the non-ulcer dyspepsia group had higher scores on all 4 measures compared to the control group.

Table 2
EYSENCK'S PERSONALITY QUESTIONNAIRE SCORES

	Extroversion	Neuroticism	Psychoticism	Lie
Subjects				
Mean	10.17	10.91	6.69	7.34
SD	5.32	4.42	5.07	6.47
Controls				
Mean	9.04	10.43	4.91	6.69
SD	4.09	4.08	3.86	5.03
Significance p (t test)	NS	NS	NS	NS

3. Depression Scores

The experimental group had significantly higher scores than the controls on the Zung Self Rating Scale of Depression ($p<0.001$) with a mean score of 40.39 compared to the controls who had a mean score of 27.39.

Table 3
ZUNG SELF RATING SCALE OF DEPRESSION SCORES

	Mean	SD	Significance p (t test)
Subjects	40.39	7.96	$p<.001$
Controls	27.39	5.94	

4. Life Difficulties

Brown et al (10) in their work on the social origins of Depression looked at life events and also life difficulties. The former were events that occurred more or less at discrete points in time, whereas the latter were ongoing difficulties that subjects were facing. They used a definition of difficulty as "a problem that had gone on for at least 4 weeks." The areas of possible life difficulties covered "work, housing, health, children, marriage, social obligation, friends, leisure, money, neighbourhood and general disappointments". Once a difficulty had been established, they probed thoroughly into the nature and extent of the difficulty, how the subject was affected, how he felt about the outcome and what sort of help or support he received. They made a distinction between subjective and objective difficulties in order to exclude any bias or exaggeration that their subjects were likely to make as a result of their depression.

In this study objective difficulties that had preceded the onset of the dyspepsia and were still experienced by the subject were taken into account and were rated as mild, moderate or severe, depending on how much it affected the subject, how often he/she spent worrying about the difficulty and whether he/she was able to cope with the problem or not.

Table 4
NUMBER AND SEVERITY OF DIFFICULTIES

	No. of difficulties	Mean Severity
Subjects	8 (8.23%)	1.5
Controls	3 (3.23%)	1

Significantly more subjects than controls had a history of chronic difficulties ($p<.05$). Eight subjects had difficulties which preceded the onset of their illness. Four of these difficulties had a duration of slightly more than a year, while the other 4 lasted for a longer period of time. Three of the controls had difficulties which had a duration of about a year.

The difficulties of the non-ulcer dyspepsia patients involved work problems (increase in workload, frequent quarrels with their colleagues), financial difficulties because of constant gambling by the spouse, infidelity of the spouse, epilepsy which caused poor school results, and frequent quarrels with relatives.

The difficulties faced by the control group involved work problems in 2 cases, and having to care for an elderly relative in the third case. On a rating of mild to severe, the dyspepsia patients had higher mean scores than the controls.

5. Psychiatric Illness

All the subjects were assessed for a psychiatric illness and diagnostic classification was made according to the Diagnostic and Statistical Manual III (11).

Table 5
PSYCHIATRIC ILLNESS AND NON-ULCER DYSPEPSIA

	Subjects	Controls
Dysthymic disorder (Depressive Neurosis)	3 (13%)	1 (4.3%)
Generalised anxiety disorder	2 (8.6%)	0 (0%)
No psychiatric disorder	18 (78.4%)	22 (95.7%)
	$X^2 = 3.066$	$p<.05$

Significantly more patients ($p < .05$) had psychiatric disorders as 5 non-ulcer dyspepsia patients were diagnosed as suffering from (i) dysthymic disorder (depressive neurosis) — 3 cases, and (ii) generalised anxiety disorder (2 cases), while only one control had a dysthymic disorder (depressive neurosis). The psychiatric disorder occurred after the onset of dyspepsia in 3 cases (2 of dysthymic disorder and one of generalized anxiety disorder) and preceded the dyspepsia in 2 cases.

DISCUSSION

Hostility and Direction of Hostility is a questionnaire designed by Caine et al (7) to"sample a wide range of possible manifestations of aggression, hostility or punitiveness." The questionnaire is made up of 5 components viz;

AH – urge to act out hostility
CO – criticism of others
PH – projected delusional hostility
SC – self criticism
G – Guilt

Hostility is the sum of all 5 parts and the Direction of Hostility is the difference between intropunitiveness (self criticism and guilt) and extropunitiveness (criticism of others, urge to act out hostility, projected delusional hostility). In this study there was no significant difference between the test and control groups. However compared to the Caine's (7) sample of 30 normals, the 2 groups had higher scores on the components of criticism of others, projected delusional hostility, self criticism, guilt and total hostility.

The high levels of Hostility in the control group was an unexpected finding, but could be due to the fact that they were relatives of psychiatric patients and had more psychopathology.

Among gastroenterological patients, hostility has been suggested to be related to sigmoid motility and found in patients with the Irritable Bowel Syndrome. Whitehead et al (5) in a controlled study found that these patients had significantly higher levels of interpersonal sensitivity and hostility. Almy (12) observed that patients who appeared hostile, depressive and spirited had increased sigmoid motility while those who seemed to be helpless and defeated had reducd sigmoid motility. Alexander (13) postulated a specific anxiety arousing conflict for each type of psychosomatic disorder. These emotional reactions were said to lead to excessive autonomic discharges which caused pathological changes in predisposed groups of persons.

The direction of Hostility of this dyspepsia group was extropunitive, while that for the controls was intropunitive, but not at a level of significance. Foulds (14) found that depressive patients were intropunitive and this decreased with improvement in their clinical state. In this study group there was little intropunitiveness, although their level of depression as measured by Zung's Self Rating Scale was significantly higher than normal. The relationship between direction of hostility and depressive symptoms in Singapore patients would merit further study.

The scores on the Eysenck's Personality Questionnaire showed that there was no significant difference between the 2 groups in extroversion, neuroticism, psychoticism and lie scores. Talley et al (15) however found that neuroticism levels were higher in his non-ulcer dyspepsia patients and also trait anxiety as measured by the Spielberger State-Trait Anxiety Questionnaire. However, other patients with dyspepsia eg. those with the Irritable Bowel Syndrome also had higher neuroticism scores. Palmer (16) showed that they had higher neuroticism levels than controls, and Latimer (17) found them to be as neurotic as neurotic patients and also more introverted than these patients. They were also more introverted than the controls.

Twenty-one percent of the study group were found to qualify for a psychiatric illness ie. dysthymic disorder (depressive neurosis) and generalized anxiety disorder but whether the psychiatric problem predisposed to or caused the dyspepsia or vice versa was difficult to establish as the numbers were too small for a definite conclusion to be drawn.

Just as those with gastroenterological illnesses have been found to have psychiatric conditions, the converse is also true. Tsoi et al (18) found that symptoms of abdominal pain, vomiting or diarrhoea were complained of in about 14.2% of a group of patients suffering from neurotic depression and 8% of a group of 100 patients with anxiety neurosis.

The relationship between life stress and gastroenterological disorders was noted by Wolf (19) in 1943. But Talley et al (20) found that life events were not higher in those with non-ulcer dyspepsia, although they could have reacted abnormally to life events. In this study, life difficulties as defined by Brown et al (10) were more frequent in the dyspepsia patients than the controls. The rating of the difficulties were also higher in the subjects. However the main type of difficulties encountered in both groups was similar, viz. work related problems.

CONCLUSION

Patients with non-ulcer dyspepsia had more psychological problems than control groups who were relatives of psychiatric outpatients, but the problems were similar. They also had more psychiatric illness compared to the control group but whether psychiatric disorders precipitated non-ulcer dyspepsia or vice versa was difficult to ascertain from this study, as the numbers seen were too small.

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