PSYCHOLOGICAL AND SOCIODEMOGRAPHIC CORRELATES OF THE IRRITABLE BOWEL SYNDROME

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INTRODUCTION

Psychological factors are responsible for the production of psychosomatic illnesses. Life events, personality, constitutional makeup, stress, environmental factors have all been incriminated in the production of psychosomatic illnesses. The exact causes and mechanisms of disease production are yet to be known. Many attempts have been made to study these psychological correlates of psychosomatic illnesses. Psychological factors can affect the severity of symptoms as well as how the patient experiences them. The disturbed bowel activity of IBS can be regarded as a physiological expression of psychologic stress of other stimulus among individuals with a particular biological predisposition.

The patient's influences can play a major role in how symptoms are reported and whether medical treatment in sought. These patients are described as more neurotic, introverted and anxious (Esler & Goulston, 1973; Dinan et al, 1991). No definite personality type has been reported (Latimer, 1983) and a suggestion has been made that IBS sufferers do not have an inherent personality abnormality but have a quantitative departure from psychophysiological reactions of healthy persons in times of stress (Ryan et al, 1984).

Prevalence of psychiatric morbidity in IBS patients varies from 20%-64% (Singh et al, 1991; Kingham & Dawson, 1985; McDonald & Bouchier, 1980). A few studies have reported as high as 90-100% prevalence rate of psychiatric illnesses in IBS patients (Gomez & Dally, 1977; Young et al, 1976; Liss et al, 1973). Anxiety and depression are found to be more common in IBS group as compared to normal controls or those with organic gastrointestinal illnesses. Some studies report a very high prevalence rate of depression in IBS patients (Rose et al, 1966; Moffic & Paykel, 1975).

MATERIAL AND METHODS

Sample: The sample for the present study comprised of thirty consecutively selected subjects attending the Gastroenterology OPD of the SMS Medical College and Hospital, Jaipur, diagnosed as having Irritable Bowel Syndrome by the consultant gastroenterologist. Before being diagnosed as IBS every patient underwent routine hematologic, urine and stool examinations as well as Gastroscopy, Sigmoidoscopy and Ultrasonography. The patient was included in the study only when the consultant gastroenterologist had excluded all other organic causes and labelled the patient as having IBS. Similarly, 30 subjects, preferably relatives or attendants of these IBS patients matched on age, sex, economic status and occupation formed the control group. The criteria for inclusion in the control group was that they should not have any history of IBS or dyspepsia in past or present, and no history of psychiatric or major physical illness in the last one year.

Tools: Both the groups were subjected to detailed evaluation, which included a complete history. IBS patients were further evaluated for their psychiatric status and after a detailed mental status examination, provisional diagnosis according to ICD-9 was made. Diagnosis was then confirmed by two consultants in the department of psychiatry. Both the groups were subjected to Hindi version of PEN inventory, (Menon & Verma, 1988), Beck depression inventory (Hindi version) (Beck et al, 1961), and Hamilton anxiety rating scale (1969). The results were statistically analyzed and compared with those of control and among IBS patients.

RESULTS AND DISCUSSION

Sociodemographic correlates of IBS

Sociodemographic data (Table 1) shows that the majority (69%) of patients were in the age group 21 to 40 years and 70% were males; 80% had a family income above Rs. 2000/- per month; 36% of patients were Govt. servants and 20% were housewives. The majority (93.3%) were educated up to secondary and above; 70% were married; 80% of the patients were from urban areas and 60% were from joint families. Sharma and Chawla (1982) reported that the majority of cases present in either the third or the fourth decade. Fielding (1977) reported these patients to be typically young adults whose symptoms began in late adolescence. In our study most of the patients had the onset of symptoms 2 to 4 years ago. Our findings are consistent with those of earlier studies.

Pimparker (1971) reported IBS to be 3 times more common in Indian males. Hislop (1971) found IBS to be more common in women, the sex ratio being 2:4:1 and Young et al (1976) found a female : male ratio of 4:1. Fielding (1977) reported IBS to be twice as common in women as in men. Welch et al (1985), in a study of psychoneurotic symptomatology of reporters and non-reporters of IBS suggested that the preponderance of women referred to outpatient clinics may reflect sociologi-
cal factors rather than the severity of IBS. Our findings are similar to those of Pimparker (1971) as opposed to those of Fielding, Hislop, and Young et al. A similar number of women in our study may reflect health care seeking behaviour of Indian women and sociological factors rather than the true incidence of illness.

Pimparker (1971) found IBS to be more common in sedentary workers. Our findings are consistent with his as none of the patients were labourers and the majority were government servants (36%) and housewives (20%). The educational level of IBS patients corresponded with their occupational status. In our study, 70% of IBS patients were married as also reported by Pimparker (1971). In this study, the majority of IBS patients (80%) were urban. Desai (1982) reported IBS to be more common in urban than in rural population in India. Preponderance of urban patients may be due to their sedentary life style and health care seeking behaviour.

Table 1
Sociodemographic Variables

| Ages (years) | IBS | Control | Total | X² |
|--------------|-----|---------|-------|----|
| 10-20        | 4 (13%) | 2 (6.6%) | 6     |    |
| 21-30        | 11 (36%) | 13 (43%) | 24    | 24 |
| 31-40        | 10 (33%) | 8 (26%) | 18    | NS |
| 41-50        | 3 (10%) | -       | 7     |    |
| 51-60        | 2 (6.6%) | 3 (10%) | 5     |    |

Table 2
Depression and Anxiety Scores

|                      | Mean | S.D. | t    | p    |
|----------------------|------|------|------|------|
| A. Depression: Beck Depression Inventory |      |      |      |      |
| IBS                  | 14.16| 10.03|      | 5.43 | <.001|
| Control              | 3.56 | 3.71 |      | 7.152| <.001|
| B. Anxiety: Hamilton Anxiety Rating Scale |      |      |      |      |
| IBS                  | 14.36| 9.50 |      |      |
| Control              | 1.46 | 2.71 |      |      |

Table 3
Psychiatric Morbidity among IBS patients (ICD-9)

| Psychiatric Morbidity | No. | % |
|-----------------------|-----|---|
| Present               | 11  | 37|
| Nil Psychiatry        | 19  | 63|
| Anxiety Neurosis      | 3   | 10|
| Neurotic Depression   | 20  |    |
| Alcohol Dependence    | 2   | 6.6|
| Premature Ejaculation | 1   | 3.3|
| Frigidity             | 1   | 3.3|

Table 4
Neuroticism, Psychoticism And Extraversion Scores

|                      | Mean | S.D. | t    | p    |
|----------------------|------|------|------|------|
| A. Neuroticism       |      |      |      |      |
| IBS                  | 8.56 | 4.394| 4.39 | <.001|
| Control              | 4.26 | 3.08 |      |      |
| B. Psychoticism      |      |      |      |      |
| IBS                  | 4.9  | 2.92 | 5.597| <.01 |
| Control              | 1.5  | 1.6  |      |      |
| C. Extraversion      |      |      |      |      |
| IBS                  | 10.6 | 2.95 | 2.493| <.01 |
| Control              | 12.4 | 2.84 |      |      |
Psychiatric Morbidity and IBS

In this study, we found that 70% of IBS patients had mild to severe depression; the difference between the IBS and control group was statistically significant on Beck's depression inventory (Table 2). This high percentage may be due to some items of the depression inventory related to appetite and loss of weight, which may increase the score. The other factor is hopelessness which is often reported by many patients. Many of these patients had tried homoeopathy and other disciplines of medicines, eg, homeopathy and ayurvedic treatment with partial or no improvement. In one third of the cases, the duration of previous treatment taken was two years or more. However, depression as diagnosed according to ICD-9 was present in only 10% of cases (Table 3). Hislop (1971) noted depressive symptoms in 80% of patients and 22.4% of patients were judged to be suicidal. Kapoor (1985) found 16.4% and Singh et al (1991) 28% of patients to suffer from neurotic depression.

The difference between the anxiety scores of IBS and control group on Hamilton Anxiety Rating Scale was significant. Anxiety neurosis as diagnosed according to ICD-9 was present in 20% of cases. Hislop (1971) reported anxiety symptoms in 68.7% of patients. Singh et al (1991) reported anxiety state in 24% and Kapoor (1985) in 7.3% of patients.

Other psychiatric diagnoses were alcoholism, frigidity and premature ejaculation. Singh et al (1991) reported premature ejaculation, impotence (8%) and one case each of schizophrenia and obsessive compulsive disorder. McDonald and Bouchier (1980) reported that 53% of cases having a psychiatric illness were from a non-organic gastrointestinal illness group and Young et al (1976) reported that 76% of IBS patients had psychiatric illness. In contrast, Thornton et al (1990) found that 76% of IBS patients had psychiatric illness. In this study, we found that 70% of IBS patients had psychiatric morbidity.

Personality and IBS

IBS patients scored higher than normals on neuroticism and psychoticism scales of PEN inventory and the difference between both the groups was highly significant (Table 4). IBS patients scored significantly lower on the extraversion scale. A number of studies have reported IBS patients to be significantly more neurotic than normal control (Almy, 1950; Esler & Goulston, 1973; Palmer et al, 1974; Latimer, 1983; Dinan et al, 1991) and suggest that psychological profiles of IBS patients may be less specific than hitherto thought. They observed moderate degree of psychoneurotic disorder amongst IBS patients but it was not significantly different from organic gastrointestinal patients. Bergeron and Monto (1985) found 4 subgroups on administering MMPI, which were inadequate dependency, somatization of affect, reaction depression and anger denial.

High scores on neuroticism scale are characterized by mood swings, lack of concentration, worries, psychosomatic symptoms, nervousness, sensitivity and inferiority feeling (Eysenck & Eysenck, 1976). High psychoticism scores in our findings correlate with the anger and denial subgroup of individuals in the study reported by Bergeron and Monto (1985). Low tolerance of frustration and aggressive tendencies are features of persons scoring high on the psychoticism scale (Eysenck, 1976). Nicholas et al (1990) found that IBS patients had increased levels of depression and pessimism, were more self centered and tended to use denial in coping with stress, as reflected by high MMPI scores on depression and hysteria scales. Though the difference between patients with functional gastrointestinal illness and healthy controls were statistically significant, the absolute differences were small, suggesting that these findings are of minimal clinical significance and personality is not causally related to functional gastrointestinal disease.

On the basis of this study the following conclusions can be drawn:

1. A significant number (though not all patients) of IBS have psychiatric morbidity.
2. IBS patients have significantly higher neuroticism and psychoticism scores on PEN inventory as compared to controls. This makes them prone to develop psychosomatic illness.
3. IBS patients have significantly higher scores on anxiety and depression rating scales.

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