MEDICAL PRACTICE

*Clinical Topics***Psychologically mediated abdominal pain in surgical and medical outpatient clinics**

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Ninety-six patients complaining of recurrent or persistent abdominal pain were referred consecutively to a surgical clinic and a medical clinic, respectively. They were examined psychiatrically after their initial physical investigation. The psychiatric examination included rating scales for depression and anxiety, a personality inventory, life-events schedule, scale of verbal expressivity, and family and personal patterns of pain and invalidism.

Only 15 patients (15.6%) had organic disorders that could be responsible for their symptoms. In the remainder, psychiatric factors were considered primarily responsible for their abdominal pain: 31 were depressed; 21 had chronic tension; in 17 hysterical mechanisms were prominent; and 12 were found to be unrecognised alcoholics. Follow-up at three and six months and recognition by 80% of the psychogenic group that a psychological explanation was plausible, confirmed the diagnoses, and over half responded favourably to psychiatric management. Features distinguishing the organic and psychogenic groups were delineated. Psychiatric assessment has a place among the investigations of non-acute abdominal pain; certainly it should not be considered simply as "a last resort."

Introduction

Recurrent or persistent abdominal pain is a common presenting complaint in medical and surgical outpatient clinics. If no organic cause can be established the patient may become a chronic attender and undergo repeated expensive and uncomfortable investigations unless some reasonable explanation for the symptoms is given, with treatment if appropriate. Depression has long been known to manifest somatically in certain circumstances,¹ and in the abdomen in particular;² while chronic tension, with its autonomic concomitants, also produces abdominal symptoms.³ Some patients unconsciously use pain to express their emotional needs.^{4,5} Repeated negative investigations, including exploratory laparotomy, add to the patient's anxiety and frustration and increase his hypochondriacal concern and invalidism. The psychiatrist cannot bypass the necessary clinical screening for physical disease, but he may be able to advise his colleagues when a predominantly psychological basis for the symptoms is likely.

We wanted to assess the usefulness of psychiatric screening in an abdominal pain clinic and find out the proportion of patients whose symptoms were predominantly emotional rather than physical and the features that may help to distinguish them. We also wanted to know why the patients in the psychogenic group presented somatically, and why their symptoms were abdominal.

Patients and methods

Patients of both sexes, aged 15-70 years were referred to either a general surgical or a medical gastroenterological clinic because of abdominal pain. We excluded those with obvious organic disease, detected at the first clinical examination. All patients were examined first by the surgeon or physician to whom they had been referred, and necessary investigations arranged. They were asked to return to the clinic a week later when the results of the tests would be known

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for psychiatric screening as part of a comprehensive investigation of their pain. It was explained that various physical and non-physical factors can produce painful symptoms and that we wanted to offer the most effective treatment.

Initial psychiatric interview—This, including the measurements listed in appendices 1 and 2, usually took place one week after the original surgical or medical consultation. The patient was given the medical or surgical opinion after the psychiatric interview, on the basis of all the investigations including the latter. Those who had no significant organic disease were so reassured. They were told that their pain was none the less real, and that we hoped to alleviate it. Every patient in whom a psychiatric diagnosis was made was offered follow-up treatment, either psychotherapy alone, or more often combined with psychotropic medication.

Second study interview—This took place three months after the first. Treatment and progress were recorded and Eysenck personality inventory and Hamilton scales were repeated. There had been several intervening visits for treatment between the first and second interviews.

Third and final interview—After a further three months there was a final interview, but follow-up has continued for the associated treatment study, reported separately.

Results

Of the 100 patients admitted four would not agree to psychiatric interview. Of the 96 patients studied 57 were women: this excess was because more women were referred to the physician than men (table I).

Only 15 patients were found to have organic disease compared with 81 considered to have a predominantly psychological cause for their pain. The organic group comprised 11 men and four women and the psychogenic group 28 men and 53 women. One man of 51, whose presenting pain was in the chest and abdomen, relieved by alkalis, had mild symptoms of tension: six months later he had his first bowel irregularities and was found to have a carcinoma of colon. This was the only case in which there was a major change in the original diagnosis.

TABLE I—Sex distribution of patients referred

	Women (n = 57)	Men (n = 39)	Total (n = 96)
Medical clinic	33	12	45
Surgical clinic	24	27	51
Organic diagnosis	4	11	15
Psychiatric diagnosis	53	28	81

All but four of the psychogenic group have been followed up for nine months in all from the first interview and of these four, two are alcoholics, one has gone abroad, and one woman refused to be seen after the third visit. Altogether 59 of the patients have been followed up for 12 months and 35 for more than 18 months.

The organic diseases, from both the medical and surgical clinics, included duodenal ulcer (7 patients), carcinoma (3), Crohn's disease (2), diverticulitis (1), cholecystitis (1), and oesophagitis (1).

The patients in the psychogenic group comprised 31 whose primary diagnosis was depression, 21 suffering from chronic tension, and 17

manifesting hysterical symptoms and using their abdominal pain as communication or to obtain necessary narcissistic satisfaction. Intermediate between the organic and psychogenic groups were 12, without detectable lesions, who drank excessively but concealed this from their general practitioners, either deliberately or in ignorance of its relevance. Like the organic group they were nearly all men, in contrast to all the other groups. (table II).

While the mean age for the whole sample was 39.6 years, patients in the organic and depressive groups were significantly older than those in the alcoholic, hysterical, and tension groups. The character of the pain, as described by both organic and psychogenic patients, showed no distinguishing features; this finding has been reported elsewhere.⁶ Pain that was unremitting through the waking hours, but did not interrupt sleep, was not described by any in the organic group, and only 15 (17%) of the psychogenic group reported this pattern. The site of pain and the length of the history showed no consistent variation between the two main groups. While those with organic pain used analgesics or alkalis only if they found them helpful, 10 of the others regularly took medication that they claimed did nothing for them.

EYSENCK PERSONALITY INVENTORY⁷ AND HAMILTON RATING SCALES

Scores for all groups were higher than normal for neuroticism, as would be expected with any type of painful illness. Similarly, but less noticeable, there was a general trend towards introversion, with closely similar scores among the groups, apart from the alcoholic and hysterical groups who showed normal extraversion scores. The lie scale, which can be viewed as a measure of social conformity or of denial, was significantly more highly scored in all the psychogenic groups than in the organic group, whose scores were normal. Raised scores for both depression and anxiety on the Hamilton rating scales^{8,9} were found in all groups, but they were significantly lower in the organic group. Among the psychogenic patients, those with depression showed the highest scores both for depression and for anxiety, even compared with those with a primary diagnosis of chronic tension.

Verbal expressivity—Feelings and fantasies were better expressed in the organic and alcoholic groups than in the others, and was worst of all in the depressives group (see appendix).

Paykel's schedule—Life events, on Paykel's schedule,¹⁰ showed an excess of bereavements, including miscarriage or termination, in the preceding 12 months among the depressive patients, and an increase in family conflicts in those with tension states. Nevertheless, the total life events scores with a mean of 64.8 for the psychogenic group and 61.4 for the organic group showed no significant difference: both are higher than the non-patient mean score.

Early experience—Significantly more of the patients in the depressive, tension, and hysterical groups had experienced abdominal pain in childhood than in the organic and alcoholic groups (table III). Proportionately more of their relatives had suffered some painful abdominal disorder. Of the 16 women in the tension group, no less than 12 reported severe dysmenorrhoea at some stage: it was less common in the organic group. In the general population it is variously estimated at 10-20%. No other psychiatric measurements showed a useful difference between groups.

Discussion

Among schoolchildren referred to hospital paediatric clinics with recurrent abdominal pain, the symptoms were emotionally

TABLE II—Mean psychometric scores according to diagnostic category

	Organic	Alcoholic	Hysterical	Chronic tension	Depression	Total
No	15	12	17	21	31	96
Men women	11.4	10/2	7/10	5/16	6/25	39/57
Eysenck personality inventory score:						
Neuroticism	13.8	15.5	14.6	14.4	12.0	
Extraversion	9.8	10.1	11.6	9.9	9.5	
Lie	2.1**	4.5	4.7	3.0	4.2	
Hamilton rating scales:						
Depression	7.0*	11.5	11.3	10.5	17.6	
Anxiety	9.3*	15.2	13.9	13.8	16.9	
Verbal expressivity scale	6.7**	6.0*	4.5	4.8	3.4	
Mean age (years)	42.8	32.3	34.3	29.0	44.8	39.6

*P = 0.05.

**P = 0.001.

TABLE III—Family and personal history: differences between the diagnostic groups in percentages

	Organic (n = 15)	Alcoholic (n = 12)	Hysterical (n = 17)	Chronic tension (n = 21)	Depression (n = 31)
Loss of parent before age 15 (death or absence)	20	8	12	40	36
Close relative with abdominal pain	20	20	73	80	64
Death of relative with abdominal pain in past five years	7	8	16	9	30
Abdominal pain in childhood	7		24	44	30
Dysmenorrhoea, past or present	25 (n = 4)	100 (n = 2)	40 (n = 10)	75 (n = 16)	65 (n = 23)

determined in 95%.¹¹ Nevertheless, we were surprised to find that among adult patients so large a proportion, particularly of women, did not have organic disease. There seems a *prima facie* case for psychiatric awareness, if not actual involvement, in an abdominal pain clinic. Among the depressed women, three dated their symptoms from hysterectomy, three from a termination of pregnancy, one from spontaneous miscarriage, and one immediately after having her illegitimate child adopted at the age of 6 weeks: these incidents seemed to provide a bereavement reaction that showed in abdominal pain.

On examining the reasons for somatisation of psychiatric states, we found support for the concept of alexithymia.⁵ Some individuals seem unable to describe their feelings except in terms of pain or action, and they use clichés such as fantastic or terrible, which they are unable to elaborate. This was not limited to those of lesser education, and was noted in all three psychogenic groups. While Nemiah postulates a constitutional deficiency, probably structural, learning mechanisms based on early experience and family patterning^{12 13} seemed important in 75% of our patients. In other patients (14%) psychological processes such as denial and displacement of unacceptable or painful emotions seemed to play a part.² A few (9%) appeared to identify with a key figure associated with abdominal pain, usually dead.¹³

All our psychogenic patients were able to continue working and lead their every-day lives: this confirmed Pilling's report¹⁴ that depressives presenting with pain had milder other symptoms and were more often able to remain at work. The moderate scores obtained by us on the Hamilton scales supported this finding, and also those of Pilowsky *et al.*¹⁵ This is consistent with the hypothesis that pain is ameliorating in depression.

Confidence in our diagnoses were supported by the follow-up interviews, by the acceptance of psychological explanations for their symptoms as plausible in 80% of the psychogenic group, and by the response to treatment. It had not been our original intention to treat the patients, merely to make observations: but in the milieu of a medical or surgical clinic our colleagues expected that a psychiatric diagnosis would be followed by psychiatric management. The results of such treatment, which included psychotherapeutic and physical methods, will be reported separately.

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Appendix

QUESTIONNAIRE ON VERBAL EXPRESSION OF EMOTION

(1) *When someone has made you angry do you:*

- Tell him plainly
- Cry or hit out
- Go away
- Get a headache or other bodily feeling
- Think about it a lot

(2) *When you feel an affectional interest in or are attracted by someone, do you:*

- Tell the person how you feel
- Talk about other subjects

- Give the person a present
 - Think about him or her a lot
 - Do nothing
- (3) *How would you or did you propose or accept marriage?*
- Explicitly
 - Casually
 - By implication

Did you enjoy it? Say how you felt?

(4) *How would you feel in these circumstances?*

- Only child killed by a car
- Large fortune comes your way
- You are asked to be chairman of, say, neighbourhood group
- You find your best friend has been robbing you
- You see an old man being mugged

Score 2 for each answer (a) in sets 1 and 2 respectively. On ability to express feelings and fantasies, score 0-2 on set 3, and 0-4 on set 4.

SCORING

Total possible score, 10.

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Why does a woman in her 30s find that on drinking alcohol, particularly sherry, she suffers from severe flushing of the neck?

Large amounts of histamine are found in sherry and red wine, less in white wine and beer, and none in alcohols that are distilled—such as brandy or whisky. I imagine that this is the most likely cause of her flushing. Some diabetics on chlorpropamide may develop facial flushing after drinking alcohol. Rarely the cause may be due to a more exotic reason. Exposure to certain chemicals encountered in industry followed by an alcoholic drink may produce an "aldehyde syndrome" with, for instance, severe flushing and itching. A rubber accelerator, disulfiram (as in Antabuse), may cause this. The oxidation of alcohol is inhibited and acetaldehyde accumulates. Related compounds are also used in germicides and fungicides and may be met on lawns and golf courses; so there could be more to the facial flush on the 19th than you ever dreamed.