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CHILDHOOD FACTORS IN DUODENAL ULCER*

BY

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At the present time it is a commonplace to regard duodenal ulcer as a "psychosomatic" illness. By this most authors imply that it is a disease which is caused, in part at least, by psychological stresses to which, according to many, a number of people are predisposed by a specific type of personality.

While there is a certain amount of agreement on the nature of this personality among the various authors who believe in a psychosomatic aetiology of the disease, very few attempts have been made to demonstrate that patients with duodenal ulcer differ significantly from the general population. The difficulties of making such a comparison are great, as "personality" is an intangible quality and not easily measured. Moreover, the work of those who have endeavoured to overcome these difficulties—for example, Davies and Wilson (1937) and Brown *et al.* (1950)—is open to the objection that any difference shown between a group of ulcer patients and a group of controls may be due to the effects of the disease rather than be an indication of its cause: it is conceivable that chronic pain in itself may affect the personality, or at any rate the performance of psychological tests.

It is therefore surprising that the childhood of patients with duodenal ulcer has not been more extensively studied, as any difference between the childhood of these people and others could not be the result of the disease. All psychologists are emphatic on the importance of the childhood in the genesis of the adult personality. Moreover, there are a number of clear-cut factors in childhood of importance in the development of personality which can be assessed accurately and used for a numerical comparison between groups.

A few authors have investigated the problem of duodenal ulcers from this aspect. Draper and Touraine (1932) found more males than females among the sib-

lings of duodenal ulcer patients in the proportion of 138 males to 100 females, in contrast with a group of cases of gall-bladder disease, in which the female siblings outnumbered the males in the proportion of 130 to 100. This was based on an investigation of 32 cases of peptic ulcer and 32 of gall-bladder disease. They use this observation to support their theory of a masculine-feminine conflict in ulcer patients.

Mittelman and Wolff (1942), in a review of 30 cases of duodenal ulcer, conclude: "The failure of the home in every instance to lend a stable background resulted from a variety of causes—unhappy married life of parents, separation or loss of father during the child's development, early remarriage of mother after separation from father."

Kapp, Rosenbaum, and Romano (1947) also state: "In each patient the origin of such strong dependent wishes was traced either to rejection in childhood or to spoiling during the same period."

Moses (1946) also considered the childhood important. He writes: "This marked basic insecurity was the most prominent feature common to the entire group. It was related to the concrete frustrating economic and emotional environment in which they were reared. The majority of these individuals came from broken homes and from a marginal economic level with its limited social and educational opportunities."

Ruesch (1948), comparing duodenal ulcers in 42 naval personnel and 20 civilians, makes the following statements: "Ulcer bearers were generally the youngest or the younger-born children in the family. In terms of years they were separated from their older and younger siblings. . . . Our patients were on the average between 3 and 6 years old at the birth of a subsequent child. . . . The naval patients were characterized by a preponderance of brothers and the civilian patients by a greater frequency of sisters."

Thus it will be seen that there is little agreement among those who have investigated this problem, and most of them have considered small series of cases. Therefore it seemed worthwhile to compare a fairly large group of patients suffering from duodenal ulcer with a similar group suffering from other diseases. Gastric ulcers were excluded in order to reduce the number of variable factors, and because most authors in the past have considered psychological factors to be of more importance in duodenal ulcer than in gastric ulcer.

Present Investigation

The points chosen for investigation were those factors in childhood which might be of importance in affecting the personality and which could be ascertained with accuracy—for example, size and composition of family, age at death of parents, illness in childhood, etc.

Factors believed to affect the incidence of duodenal ulcer are sex, age, occupation, geographical situation, and time. To eliminate errors due to these factors the investigation was limited to males, and the patients in the control group were chosen to match the ulcer group in five-year age groups.

Occupational differences can only have been slight, as all were hospital patients in a regional hospital in North-west London, and, as is shown later, there was no difference between the two groups in social class. Temporal differences can be ignored, as both the ulcer patients and the control group were interviewed in 1950.

*This paper is based on a thesis for the degree of M.D.Cantab.

Interviews were had with 250 patients with duodenal ulcer and the same number of patients suffering from various other diseases, who acted as controls. The last 164 in each group were interviewed more fully in order to extend the scope of the investigation, but there was no particular selection of these, as all the ulcer patients were consecutive, except that there was an interval after the first hundred. Only one ulcer patient was not included—a hemiplegic following a birth injury who was mentally defective and incapable of answering questions. The age distribution of the ulcer group and the controls is shown in Table I.

TABLE I.—Age Distribution

Age	D.U.s and Controls
15-20	3 (2)
21-25	10 (8)
26-30	14 (12)
31-35	25 (14)
36-40	34 (21)
41-45	54 (34)
46-50	38 (30)
51-55	13 (10)
56-60	27 (14)
61-65	14 (7)
66-70	9 (6)
71-75	5 (4)
76-80	4 (2)
Total	250(164)

The figures in parentheses refer to the 164 cases of duodenal ulcer and their controls from whom fuller details were obtained.

Diagnoses were recorded only for the last 164 patients in the control group (Table II), but there was nothing to suggest that the diagnoses of the first 86 differed in any way from those of this group.

TABLE II.—Diagnoses of 164 Consecutive Controls

Surgical		Medical	
Hernias	23	Cardiovascular	11
Appendicitis	15	Neurological	18
Carcinomata	12	Respiratory	14
Genito-urinary	10	Renal	12
Fractures	9	Diabetes	4
Other orthopaedic conditions	10	Miscellaneous	11
Other surgical conditions	15		
	94		70

When the material was collected from the controls, only those giving a history of a definite ulcer demonstrated by x-ray film or operation were excluded. Thus the control group may include a small number of unproved ulcers, but none was in hospital for investigation of dyspepsia. No patient, except the above, was excluded once he had given the details required. Approximately 20 patients were found to be incapable of answering the questions owing to their medical state—for example, uraemia, aphasia, and gross senility.

Family Factors

The importance to psychological development of an individual's position in his family, and the size of that family, are well known and are mentioned by numerous authors—for example, Fenichel (1934). The different amount of time that parents with a small or large family can devote to each member of it, the traditional belief that the only child is spoilt, the early assumption of responsibility by the eldest child in a large family, and the tendency of the youngest child, especially if it is a boy, to be regarded as mother's favourite, are all potential factors in the formation of personality. It therefore seemed worth while investigating whether any of these factors could be found to predispose to the development of a duodenal ulcer.

It will be seen from Table III that there is no real difference between the ulcer group and the controls in

TABLE III.—Number of Siblings in Family

	Total No. of Siblings, Including Patient				
	1-3	4-6	7-9	10-12	13+
(A) Size of family:					
D.U. (250 cases)	70	96	60	17	7
Controls (250 cases)	75	104	40	24	7
(B) Position in family:		D.U.			Controls
		(250 cases)			(250 cases)
Eldest child		45			54
Youngest child		50			62
Only child		17			12
** "Effective" only child		13			21
** "Effective" eldest child		8			6
** "Effective" youngest child		17			15
(C) Position among male siblings:		(164 cases)			(164 cases)
Eldest boy		40			42
Youngest boy		45			56
Only boy		22			22
(D) Sex of siblings:		(164 cases)			(164 cases)
No. of brothers		328			351
No. of sisters		373			389

* By "effective" is meant a separation from the appropriate sibling or siblings by six or more years.

the number of siblings. The slightly greater number of only children among the duodenal ulcers is not statistically significant. The mean numbers of siblings in the duodenal ulcer group of 250 cases and their controls are 5.6 and 5.5 respectively.

Nor could any evidence be found to support the contention of Ruesch that patients with duodenal ulcer tend to be the younger children. In fact, there were slightly fewer youngest children among the duodenal ulcer group than among the controls. In any unselected community the number of eldest children can be expected to be slightly less than the number of youngest, and this is what was found in both groups.

A comparison was also made between the two groups in the number of patients who were separated from the next sibling, older or younger, by a period of six years or more. It was felt that the position of a boy who had been for many years the only or the youngest child, and then has his position threatened by the arrival of another sibling, was one that might reasonably lead to psychological difficulties. Thus the figures are given for what is termed "effective" only child—that is, one who is separated from the nearest sibling by six or more years—and for "effective" eldest and youngest who have six years between themselves and the next older and younger sibling respectively. This also produced a check on Ruesch's statement that patients with duodenal ulcer tend to be separated from their next older or younger sibling by a space of several years, which isolated them from the rest of the children.

It will be seen that there is no difference in this respect between the groups. In the 164 more fully documented duodenal ulcers and their corresponding controls the position of the patient among the boys of the family was also recorded. Again there is no difference.

The number of brothers and sisters of these 164 were also recorded to check the statement of Draper and Touraine that ulcer families tend to produce more males. It will be seen that for both groups there is a slight excess of females. There is again no difference between the ulcer group and the controls.

Parental Factors

The early loss of a parent, especially the mother, by death or separation is obviously an important factor in character formation. It has been shown that early

children fell into social class III. For convenience, classes I and II are added together, as their numbers are small, and classes IV and V are similarly joined.

The figures are set out to show a comparison between the social class of the duodenal ulcer group and the controls, and between the fathers of these two groups. In addition, the difference, where there was one, between the social class of father and son has been recorded as "Up" or "Down."

It will be seen that the social class of the duodenal ulcer patients is not significantly different from that of the controls, that the social class of the fathers of both groups likewise does not differ significantly, and that the movement from one social class to another that has taken place has been the same for both groups, the number of those that have raised their social status being approximately equal to those who have declined.

No attempt was made to classify them by actual occupations, as it was felt that the numbers concerned were too small for any conclusions to be drawn, and this has already been done very thoroughly by others.

Discussion

The findings suggest that there is no difference between people with duodenal ulcers and others in the size, composition, or social class of the family into which they were born, in their educational standard at school, or in illness in childhood. Neither do duodenal ulcer patients seem to be more fortunate or less fortunate than others in early separation from parental influence. In none of the points investigated could the findings of other authors be confirmed. It may well be that those points are irrelevant to the development of the "ulcer personality," and that investigation of other childhood features might have shown some important differences between the groups studied: it may be that factors operating in late adolescence or early adult life are responsible for the characteristics said to be shown by these patients. However, unless further investigations show some clear-cut differences between duodenal ulcer patients and the general population regarding factors operating before the appearance of symptoms, the possibility that the "ulcer personality" may be the effect rather than the cause of the disease must be considered.

Summary

In view of the possible aetiological importance of personality in duodenal ulcer a comparison was made between the childhood background of a group of 250 male patients with duodenal ulcer and a similar group of patients with other diseases. No difference could be found between the two groups in any of the points investigated.

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AN UNUSUAL CASE OF TRAUMATIC HEART DISEASE WITH CLINICAL RECOVERY

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Cardiac damage, as the result of non-penetrating injuries or blows to the chest wall, has been gaining increasing recognition in the medical literature of recent years. That cardiac lesions of clinical and pathological significance may arise as the result of blows on the chest wall is a fact well established by the work of Barber (1938, 1940), Beck (1935), Warburg (1938, 1940), and others. There has been, however, an unfortunate tendency on the part of certain authors to attribute all sorts of perfectly natural and totally unrelated phenomena of the heart to preceding traumata of insignificant character. Such a tendency can deserve only our severest criticism.

In view of the unusual nature of the cardiac damage and its proved relationship to a previous non-penetrating injury to the chest wall, the following case report is considered worthy of publication.

Case Report

An artillery officer aged 36 has been under our observation since the middle of 1949. Except for childhood ailments like mumps, measles, and scarlet fever, and attacks of malaria and paratyphoid, all within the first decade of life, the patient had enjoyed extraordinarily good health until the time of the accident here described. He had always led an active or athletic life, indulging freely in boxing, swimming, hockey, and cross-country running. There was nothing in the past history to suggest any form of cardiac distress or disease. The family history was also negative, there being no cases of heart disease, sudden death, apoplexy, or high blood pressure.

About the beginning of April, 1948, whilst on a gunnery course at the School of Artillery, he was suddenly struck over the left side of the chest by the "perch handle" of a 25-pounder gun. The sudden impact caused a momentary loss of consciousness, followed by a moderate degree of pain in the chest. During the succeeding weeks he was unable to run or to exert himself on account of the pain; at night the pain used to worry him, necessitating the adoption, throughout the night, of a right lateral decubitus. After a period of three weeks, during which he continued massaging of the chest wall with "iodex," the pain seemed to decrease during the nights, but during the early mornings, when climbing a hill, he experienced a peculiar sense of constriction, which would compel him to stop; this feeling would pass off after a period of nausea and retching.

On two occasions he woke up in the middle of the night with a "strange feeling" in his chest and a profuse "cold sweat"; these feelings were relieved by vomiting. One evening, while cycling, the feeling of constriction in the chest became so intense that he could not get home in spite of all his efforts. A similar sense of constriction in the chest but of much greater intensity overtook him suddenly on the night of May 9, 1948, during a railway journey. The pain was intense enough for him to "scream for assistance." He was carried to a military hospital and given an injection of morphine, in spite of which the pain continued unabated until the night of the 11th. The pain, which was more intense on coughing and deep breathing, for the first time had been bilaterally symmetrical and agonizing.