The role of intelligence and depression in Indian and Black duodenal ulcer patients in South Africa

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Summary
In a comparison of South African Indian and Black duodenal ulcer patients and a control group of hospital patients, intelligence and depression were not found to be relevant to the incidence of duodenal ulceration. This finding emerges as part of an ongoing study on the apparent increase of duodenal ulceration in South African Indians and Blacks. The role of psychological medicine in a consultation/liaison service is discussed.

In contrast to the reported decline in the prevalence of duodenal ulceration in the USA and Western Europe, this condition is being increasingly diagnosed in South African Indians and Blacks.

Duodenal ulceration is no longer viewed as a disease sui generis. It is generally accepted today that in addition to organ vulnerability, pathogenic family patterns, social pathology and diet, psychological conflict and stress are important aetiological or exacerbating factors. The nature of such psychological variables is, however, often controversial. Recent studies suggest that feelings of powerlessness, as well as situational stress, specific conflict and personality factors, are relevant in the aetiology of duodenal ulceration in South African Indians and Blacks.

Psychological adaptation in an individual normally reflects an interplay between and, for example, economic status. The role of stress is influenced by factors such as the degree of stress, stress tolerance, and perception of adjustment demands. This perception interacts at least in part with one's intelligence and depression in South African Indian and Black duodenal ulcer patients. On the basis of our findings in previous studies we formulated a psychophysiological hypothesis for the pathogenesis of duodenal ulceration. We were interested in taking a closer look at the significance of intelligence and depression in our patient samples since, as pointed out, these variables may interact with a patient's perception of his particular adjustmental demands. There are very few studies which contribute to an analysis of psychosomatic disease within the context of these South African population groups. Our knowledge in this sphere is scanty although psychological research in general has achieved much in Africa.

Patients and methods
The subjects were 35 patients at King Edward VIII Hospital, Durban, with endoscopically confirmed duodenal ulceration. Nineteen patients were Indians (5 females, 14 males) and 16 were Blacks (6 females, 10 males). Thirty-five patients at the same hospital who did not have duodenal ulcers were used as controls. The study was undertaken between April 1978 and October 1979 and forms part of an ongoing research project on Black and Indian duodenal ulceration. Endoscopic examination was carried out in all patients and appropriate diagnostic studies were undertaken before assigning them to the various diagnostic groups.

Patients and controls were matched on the basis of occupation, sex, ethnic origin, absence of mental illness and age. The ages of both groups ranged from 16 to 54 years. The mean age of the duodenal ulcer patients was 34.9 years and that of the controls 35.1 years.

All subjects completed the Standard Progressive Matrices and the Beck Depression Inventory within 1 - 5 days after being admitted. In addition, each patient was subjected to a sociological questionnaire and a detailed psychiatric interview. The Standard Progressive Matrices served as the measure of the general intellectual level of functioning. Since this is a performance scale it was used in preference to other scales in order to minimize the effect of cultural factors. The patients' percentile scores on the scale were converted to IQ equivalents according to the conversion table of Peck. The cut-off point for the effective determination of depression on the Beck Depression Inventory was 14, while a score of 26 and above was used for determining severe depression. This scale has been used before in medical patients by other research workers. In our study it was administered as a structured interview by two interviewers, an Indian for the Indian patients and a Black for the Black patients. Again this was necessary in order to minimize contamination of the results by cultural and language factors.

Results
No statistically significant difference in IQ was found between Indian duodenal ulcer patients and controls ($\chi^2 = 0.16; \text{NS}$) or...
between Black duodenal ulcer patients and controls ($\chi^2 = 0.29$; NS). Overall, it was noted that a fair proportion of patients functioned within the low-average intellectual range. Similarly, the difference in occurrence of depression in Indian duodenal ulcer patients and controls was not found to be statistically significant ($\chi^2 = 0.64$; NS). This also held true for the Black duodenal ulcer patients and controls ($\chi^2 = 0.17$; NS). Overall, however, approximately one-fifth of the patients fitted the predetermined criteria for depression. Twenty per cent of the combined duodenal ulcer patients were found to be depressed as opposed to 18% of the controls. Since most of these patients scored between 14 and 26 on the Beck Depression Inventory their depression was not severe.

Discussion

The intelligence levels of duodenal ulcer patients were not found to be different from those of controls. This does not necessarily argue against a link between ulceration and self-perceptual patterns, or between duodenal ulceration and a patient's perception of his environment, or preclude the aggravating effect of other psychological variables in the disease process. Other factors mentioned earlier such as feelings of powerlessness, stressful situations, conflict and certain personality traits would, however, appear to be more relevant in this regard. Some depression is demonstrated in peptic ulcer patients. Since, however, we found neither Indian nor Black duodenal ulcer patients to be significantly more depressed than the controls, it appears that their depression may be appropriate to their life situation, as is often the case with other medical patients, rather than being pertinent to duodenal ulceration.

Psychosomatic disorders require treatment of the physical as well as the psychological problems. The first therapeutic consideration following symptomatic relief is psychotherapy which aims at altering the patient's psychic conflict, i.e. conflict resolution. There is a need to identify external factors possibly associated with duodenal ulceration. Situations that generate stress or feelings of 'powerlessness' can be reduced by enabling the patient to identify those environmental circumstances he can cope with. The presence of a normal range of intelligence and the absence of severe depression makes the patient more amenable to psychotherapy. This has assisted us in designing a consultation/liaison service around an understanding of our patients' emotional needs and helping them to recognize factors related to the apparent increase in duodenal ulceration in our Indian and Black population.

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REFERENCES