The effect of stressful life situations on the healing of duodenal ulceration

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Summary

Ninety-five duodenal ulcer patients were assessed by a gastro-enterologist as being either difficult or easy healers. Difficult healers were defined as those taking longer than 6 weeks to heal or those who relapsed within 6 months of healing, as assessed by endoscopy. Easy healers were defined as being healed within 6 weeks of treatment and not having relapsed.

Significantly more stressful life situations occurred in patients with a difficult healing period than in those who experienced easy healing. Of the stressful life situations which were considered the area of family stress appeared most crucial in retarding easy recovery.

Results

Forty-two patients experienced difficulty in ulcer healing while 53 healed easily. Twenty-five of those who experienced difficult healing were Indians (23 males and 2 females) and 17 were Black (9 males and 8 females). Those classified as easy healers were 27 Indians (16 males and 11 females) and 26 Blacks (21 males and 5 females).

Multiple stressful life situations

As shown in Table I, 3 - 5 stressful life situations were reported by 17 Indian male patients with difficult healing and only 1 Indian male with easy healing ($x^2 = 17,3830; P = 0.0002$). In all 13 Indian females no significant difference emerged in the number of stressful life areas reported by difficult and easy healers ($x^2 = 2,7576; P = 0,2519, NS$).

In the total Indian group, 3 - 5 stressful life situations were reported by 17 patients with difficult healing as opposed to 7 patients with easy healing ($x^2 = 9,3035; P = 0,0095$).

As shown in Table II, 2 stressful life situations were reported by 7 Black male patients with difficult healing and 4 who healed easily. Three to 5 stressful life situations were reported by 2 difficult healers, but by no easy healers ($x^2 = 16,3636; P = 0,0003$). In the Black females, as in their Indian counterparts, there was no significant difference between difficult and easy healers ($x^2 = 2,2698; P = 0,3214, NS$).

In the total Black group 2 stressful life situations were reported by 11 difficult and 7 easy healers, while 3 - 5 stressful life situations were reported by 5 difficult healers but by no easy healers ($x^2 = 15,1978; P = 0,0001$).

Fig. 1 indicates that in the total patient group ($N = 95$), 37 out of 40 difficult healers have 2 - 5 stressful life situations (95%) compared with 28 out of 55 easy healers (51%).

It is apparent that there is a significant difference between a difficult or easy course of healing, which is associated with the presence or absence of many stressful life situations.
Table III indicates that of the Indian males experiencing difficulty in healing the highest percentage reported family conflict (70%), followed by financial stress (61%), occupational stress (57%), accommodation problems (39%) and marital conflicts (35%). A high percentage of Black males experiencing difficult healing reported financial problems (89%) followed by family conflict (55%) and occupational stress (33%). Marital conflict and accommodation problems were reported by Black males to a lesser degree (22% and 11% respectively). Excessive alcohol use was reported by both Indian (22%) and Black males (33%).

In the easy healer group, 50% of Indian males reported occupational stress followed by financial problems (44%) and family conflict (38%). Black males who healed easily reported financial problems most frequently (57%), followed by occupational stress (24%). Only a small percentage reported family conflict and none described marital problems.

The female groups were small and only 2 of the 13 Indian women were assessed as having difficulty with ulcer healing. Both reported family and marital conflict but as they were not employed no occupational stress was reported. They both reported financial stress and worry over a husband’s illness. Financial and family problems predominated in the 8 Black females experiencing difficult healing. Four of the 8 reported individual problems causing stress, e.g. one patient had a badly scarred face incurred as a result of a motor accident.

Eleven of the 13 Indian females assessed as healing easily reported financial problems, followed by family and marital conflict and accommodation problems. All Black females in the easy healing group reported financial problems, followed by accommodation problems and family conflict.

A test of the standard error of difference of proportions showed a significant difference between difficult and easy healers in the area of family conflict in the total group of Indian patients ($P < 0.01$). The difference was also significant as regards reporting of accommodation problems and alcohol abuse ($P < 0.05$), and disease of a family member causing stress ($P < 0.10$).

In the total group of Black patients the difference between difficult and easy healers was significant in the areas of family and marital conflict ($P < 0.005$) and alcohol abuse ($P < 0.05$). All other differences between difficult and easy healers were not significant.

It was therefore evident that family conflict, marital problems and alcohol abuse were the major life problems delaying healing. Financial problems were experienced by the large majority of the patients and there was no significant difference between easy and difficult healers in this respect.
Several researchers have studied socio-cultural and environmental factors in the etiology of ulcer disease. Susser and Pflanz have presented selective overviews of such research. Patients with duodenal ulcers have been found to have a higher incidence of psychosocial problems, particularly those involved in migration to a new, strange environment. Pflanz emphasizes the methodological problems that stand in the way of isolating relevant variables in the causation of duodenal ulcer disease. He is of the opinion that 'the meaning of the data is often dictated by the author's favourite hypothesis rather than allowing the data to speak for itself or generate new hypotheses and investigations'.

In this present study Pflanz's recommendations have been followed, i.e. relevant data have been assembled about the socio-economic and interpersonal life situations of duodenal ulcer patients together with their attitudes and feelings regarding their environmental milieu, with a view to generating new hypotheses. The present study has also been in terms of the extent to which duodenal ulcer patients perceive their life situations as stressful. The importance of the patient's perception of stress rather than the evaluation of an objective observer has been noted in studies by Wolff, Mirsky and Hinkle. Hinkle found that periods of life during which the informant's relation to his social and interpersonal environment had been evaluated as 'highly unsatisfactory' were strongly associated with the occurrence of 'clusters of illness'. Holmes and Rahe and Petrich and Holmes established that a cluster of life events requiring social adjustment is significantly associated with the time of onset of illness.

Similarly, the present study indicated the effect of stress on the healing propensity of patients with duodenal ulcer disease. The patients assessed by physicians as experiencing difficult healing after initial diagnosis and treatment were those who had a greater stress load (in terms of a greater number of stressful life situations) than those whose ulcers healed easily. Forty-two patients out of 95 healing with difficulty is indicative of the high relapse rate found at the Gastro-intestinal Clinic (unpublished data). It is postulated that stressful lifestyles and difficult social circumstances result in the individual being in a situation which aggravates the action of the disease and militates against easy healing.

There was a difference in the way in which Black and Indian patients perceived their life situations. Indian patients, on the whole, perceived their lives as having more stressful areas than Black patients. For example, all Indian patients reported stress in addition to worry over their ulcer disease, while 2 Black patients reported no stress. Twenty-four Indian patients reported 3 - 5 stressful areas while only 5 Black patients did.

The financial situation of patients was reported as stressful by the majority, whether their course of healing was with or without difficulty. A possible explanation for this is that the majority of patients were from the unskilled and manual or routine non-manual and semi-skilled manual groups where low wages are the norm. Occupational stress was reported by Indian patients to a greater degree than by Black patients. In fact, Blacks often described themselves as having no stress in their job situation. Thus, although occupation and financial stress are often closely related, in Blacks the stress was perceived as solely financial rather than financial and occupational.

Crucial areas differentiating difficult and easy healers were found to be the areas of family stress and marital conflict. Low incomes and stress in the job situation caused by long hours and physically tiring or repetitive work eventually affect the patient's marital and family life, also causing stress or conflict in these areas. This explanation supports the finding that multiple stress factors are associated with a difficult recovery period in duodenal ulcer disease.

An obvious possibility in this type of analysis is that patients' reporting stress to some degree are not necessarily exposed to more stress but are 'worriers' or people more sensitive to frustration or prone to anxiety. If this were the case, the reporting of any kind of stress would be the significant feature rather than a particular type of stress such as family stress. The tendency would be for the 'stress reporters' to report all kinds of stress to a greater extent than other patients. However, this is not the case since some stresses emerge as differentiators of difficult v. easy healers and others do not. Therefore it seems that, to some degree at any rate, particular stresses such as family, marital and accommodation problems and alcohol abuse are concrete realities in the lives of patients experiencing difficulty in ulcer healing.

This aspect of the psychosocial research into factors associated with duodenal ulcer disease in the Indian and Black populations of Durban points to the need for assistance to patients in the management of stress areas in their lives. Such social intervention procedures as family therapy, marriage counselling, casework with individuals in respect of problems at work or at

### Discussion

#### TABLE III: TYPES OF STRESSFUL LIFE SITUATIONS EXPERIENCED BY DUODENAL ULCER PATIENTS (IN PERCENTAGES)

<table>
<thead>
<tr>
<th>Stress areas</th>
<th>Indian Male</th>
<th>Indian Female</th>
<th>Indian Total</th>
<th>Black Male</th>
<th>Black Female</th>
<th>Black Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No stress</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Occupational</td>
<td>57</td>
<td>0</td>
<td>57</td>
<td>33</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>Financial</td>
<td>61</td>
<td>100</td>
<td>64</td>
<td>69</td>
<td>63</td>
<td>76</td>
</tr>
<tr>
<td>Family conflict</td>
<td>70</td>
<td>100</td>
<td>72</td>
<td>55</td>
<td>63</td>
<td>59</td>
</tr>
<tr>
<td>Marital conflict</td>
<td>35</td>
<td>100</td>
<td>40</td>
<td>22</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>Individual problem</td>
<td>9</td>
<td>0</td>
<td>8</td>
<td>6</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Accommodation</td>
<td>39</td>
<td>50</td>
<td>40</td>
<td>11</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Alcohol abuse</td>
<td>22</td>
<td>0</td>
<td>20</td>
<td>33</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Family disease</td>
<td>26</td>
<td>100</td>
<td>32</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
</tbody>
</table>


1 SE of difference of proportions, P < 0.01.
2 SE of difference of proportions, P < 0.05.
3 SE of difference of proportions, P < 0.10.
4 SE of difference of proportions, P < 0.005.
5 SE of difference of proportions, P < 0.005.
6 SE of difference of proportions, P < 0.005.
7 SE of difference of proportions, P < 0.005.

All other differences between difficult and easy healers not significant.
Pre-operative biliary drainage in patients with obstructive jaundice

A comparison of the percutaneous transhepatic and endoscopic transpapillary routes

A. R. W. HATFIELD, R. S. MURRAY

Summary

Pre-operative biliary drainage may reduce the mortality and morbidity associated with surgery in the patient with obstructive jaundice. It is possible to drain the bile duct via two routes pre-operatively. The transhepatic route was used in 12 patients and the papillary route in 8. Only 1 patient died in the postoperative period. Transhepatic drainage was found suitable for routine use in patients with a dilated biliary tree, in particular in those with unresponsive cholangitis. Transpapillary drainage is not suitable for routine use but has a place in short-term drainage in patients with mild jaundice and cholangitis caused by gallstones in the bile duct.


Surgery in patients with obstructive jaundice is associated with a high incidence of postoperative complications and a substantial mortality rate. It is possible that pre-operative decompression of the biliary tree may reduce these complications. Percutaneous transhepatic drainage of the biliary tree has been described following fine-needle cholangiography. It is also possible to drain the bile duct via the papilla following endoscopic retrograde cholangiopancreatography (ERCP). We describe our early experience with both routes of drainage in patients with obstructive jaundice.

Methods

Percutaneous transhepatic drainage

Following opacification of the biliary duct system with a transhepatic cholangiogram using a Chiba needle, a sheathed Longdwell needle (18G) was directed under radiographic control into an intrahepatic bile duct. The Longdwell needle was inserted via the right lateral approach, and a posteriorly lying intrahepatic radicle in the right lobe was usually punctured. Biplane screening was often used to control the direction of the needle accurately.

Wherever possible the needle was inserted below the level of the diaphragm, but in some patients it had to be inserted above the parietal pleural reflection in order to enter more vertically positioned ducts.

Following puncture of the duct, a movable-core 'J'-type or straight floppy-ended guide wire was inserted down the sheath of the Longdwell needle and positioned above the level of biliary obstruction (Fig. 1a); the Teflon sheath was then removed. In the early part of the study a straight catheter with side-holes (Cook's 7FG) was then inserted over the guide wire and left lying above the site of obstruction; the guide wire was then removed (Fig. 1b). The biliary tree was always opacified with dilute contrast (25% Hypaque) to make visualization and manipulation of the guide wire and catheter easier.

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Date received: 10 February 1981.