CONTROLLED TRIAL OF HYPNOTHERAPY IN RELAPSE PREVENTION OF DUODENAL ULCERATION

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Summary 30 patients with rapidly relapsing duodenal ulceration were studied to assess the possible benefit of hypnotherapy in relapse prevention. After the ulcer had healed on treatment with ranitidine, the drug was continued for a further 10 weeks during which time patients received either hypnotherapy or no hypnotherapy. The two randomly selected groups were comparable in terms of age, sex, smoking habits, and alcohol consumption. Follow-up of both groups of patients was continued for 12 months after the cessation of ranitidine. After 1 year, 8 (53%) of the hypnotherapy patients and 15 (100%) of the control subjects had relapsed. The results of this study suggest that hypnotherapy may be a useful therapeutic adjunct for some patients with chronic recurrent duodenal ulceration.

Introduction

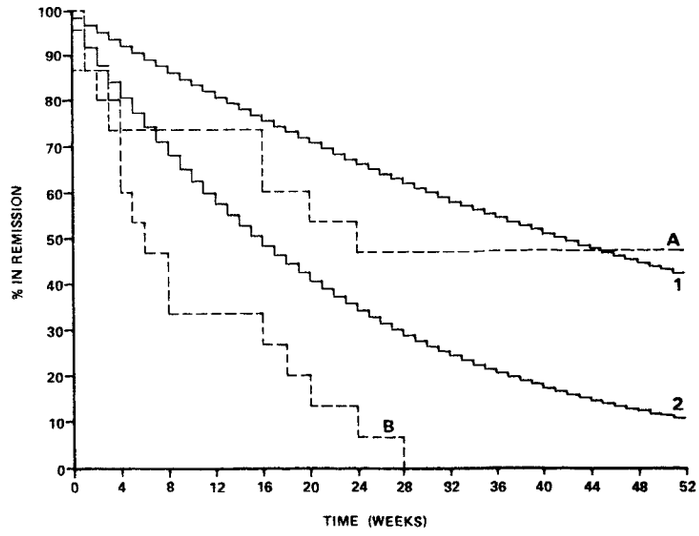
DUODENAL ulceration can now be rapidly and effectively healed by many drugs,[1,2] but post-treatment relapse remains so troublesome that continuous maintenance therapy has been advocated.[3,4] Relapse rates may vary depending on the healing agent employed:[5] in some studies over 90% of patients relapse following the use of H_2 receptor antagonists,[6] although about 85% is a more usual one year relapse rate.[7-12] Tripotassium dicitratobismuthate appears to be associated with a lower relapse rate of about 60%.[7-11]

The aetiology of duodenal ulceration is poorly understood but it is probably multifactorial.[13] The effects of emotion on the gastric mucosa were observed as early as 1833.[14] Stress, both psychological and physical, has since been shown to affect gastric emptying and the secretion of acid and pepsin,[15-18] but attempts to causally link stress and peptic ulcer disease have produced conflicting results.[19-25]

We are evaluating the role of hypnotherapy in gastroenterology,[26-28] and felt that some of the possible aetiological mechanisms operating in peptic ulceration might be amenable to modification by this treatment. Hypnotherapy can modify the response to betazole-stimulated gastric acid secretion,[29] although the mechanism by which this is mediated remains unclear. We report a controlled trial of the effect of hypnotherapy on duodenal ulceration.

Patients and Methods

We studied 30 patients (16 males, 14 females, mean age 40 years, SD 9) with endoscopically proven duodenal ulceration: all had frequently relapsing disease, with at least one confirmed relapse in the previous 6 months. Before entry into the trial, patients were randomly assigned to receive either hypnotherapy or no hypnotherapy after ulcer healing had occurred. All were treated with ranitidine 150 mg twice daily and, after healing of the ulcer was proved by endoscopy, the drug was continued for a further 10 weeks at the same dose in both groups whilst hypnotherapy was applied to the active group. The active group received 7 sessions of hypnotherapy and were given an audio tape for daily autohypnosis; the other group were seen as often, but did not receive any hypnotherapy. The ranitidine was then stopped and both groups were reviewed every 3 months for a further year, with the active group receiving hypnotherapy at their follow-up visits. All subjects had an endoscopy at the end of the study, or sooner if a symptomatic relapse occurred.



Comparison of relapse rates in hypnotherapy (A) and control subjects (B).

1 and 2 show relapse rates for tripotassium dicitratobismuthate and ranitidine respectively (derived from published work).[5]

Hypnosis was induced as previously described,[26-28] with attention focused on the abdomen by the use of the patient's hand. They were asked to imagine warmth beneath the hand and to relate this to the control of gastric secretion. Reinforcement by visualisation was used if the patient had this ability.

The demographic characteristics (age, sex, alcohol consumption, smoking habits) of the two groups were compared by use of a chi-squared (contingency table) analysis, unpaired Student's *t*-test, or Mann-Whitney U-test as appropriate. The times to relapse were compared by standard life-table methods. The relapse rates at 12 months were also compared directly by use of a chi-squared test. Comparative life-table curves for patients treated with H_2 receptor antagonists or tripotassium dicitratobismuthate were constructed with assumed monthly relapse rates of 17% and 7%, respectively.[5] Significance was set at the conventional 5% level. All computations were done with the SPSS-X computer program.[30]

Results

No significant differences between the two groups were found for age, sex, alcohol consumption, or smoking habits. No change in smoking habits or alcohol consumption occurred as a result of hypnotherapy.

The accompanying figure shows relapse curves over time for the hypnotherapy patients and the controls. Relapse curves following treatment with H_2 receptor antagonists or tripotassium dicitratobismuthate were calculated from a review of published work[5] and are shown on the same figure. The overall differences between the shapes of relapse curves for the patients and the controls was close to significance (Lee-Desu statistic, $p = 0{\cdot}066$). As both groups had been followed up for a full 12 months, a direct comparison of the one year relapse rates for the patients (53%) and controls (100%) was considered valid: this difference was significant (chi-square [1] $= 6{\cdot}71$, $p = 0{\cdot}01$).

Discussion

This study shows that hypnotherapy is helpful in maintaining remission in those patients with duodenal ulceration who are particularly prone to relapse. The

patients selected for this study tended to be subjects with difficult relapsing ulceration: this meant that they were highly motivated to try this form of treatment, and probably also explains the particularly high relapse rate in the control subjects. The relapse rate after hypnotherapy is still better than that following the cessation of H_2 antagonists in the less selected group of subjects compiled from published data,[5] and marginally better than that after the use of tripotassium dicitratobismuthate.

The mechanism by which hypnotherapy could influence the natural history of duodenal ulceration is uncertain. Duodenal ulceration was originally described as a classic psychosomatic disorder,[31] but the failure to demonstrate a direct link between psychological factors and the ulcer disease led to disillusionment. Modern psychosomatic theory suggests that illness emerges from the interplay of sociopsychological and biological factors.[32] In this model, hypnotherapy might operate at a variety of levels in the disease process: it could act in a nonspecific psychotherapeutic sense increasing 'coping' capacities and decreasing perceived stress. Alternatively, hypnotically induced relaxation may affect gastric acid secretion, and there is some experimental evidence for this.[29] Further studies are now in progress to assess the effect of hypnotherapy on gastric secretory function. The early relapse rate in the hypnotherapy subjects was similar to that of controls, but subsequently the curves showed a much greater separation. This finding could indicate that there is a subgroup of subjects who are particularly responsive to therapy. However, a detailed review of psychological and clinical parameters did not reveal any specific feature that could be used to predict a response to this form of treatment.

Hypnotherapy is a time-consuming and limited resource, but the results of this study suggest that it may be useful in selected patients with duodenal ulceration.

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INCREASED ENERGY EXPENDITURE IN YOUNG CHILDREN WITH CYSTIC FIBROSIS

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Summary To investigate the role of energy expenditure in the altered energy balance in cystic fibrosis (CF), total energy expenditure (TEE) was measured by the doubly-labelled water method in 9 clinically well CF infants (body weight 7·3–10·9 kg) without chronic lung disease. CF infants had 25% higher rates of energy expenditure when compared with data derived from measurements of TEE obtained by the same method in 16 healthy infants, matched for age and body weight. Mean TEE (SEM) for CF was 950 (38) kcal, vs 876 (72) kcal for controls matched for age and 758 (46) kcal for controls matched for weight. Although subclinical disease activity cannot be excluded as a determinant of the excess TEE, the possibility of an energy-requiring basic defect is suggested, because further analysis indicated that factors other than body weight, degree of underweight, presence of pancreatic insufficiency, or presence of lung disease were important. Increased TEE may contribute to undernutrition in CF, even in the absence of chronic lung disease.

Introduction

CHRONIC nutritional growth retardation is a common and important feature of cystic fibrosis (CF).[1] Studies of body composition and measurements of protein turnover

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