Diabetic control was very difficult. Avoiding confrontation by giving the patient responsibility for both her eating and managing her diabetes merely resulted in further weight loss. After seven months she discharged herself weighing 46 kg. Four months later her pattern of eating remained disturbed. She was not testing her urine but her weight had increased to 49 kg.

(2) This patient developed diabetes when aged 13 years. Her management was complicated by a fear of injections and occasional dietary indiscretions. At 16 she started to diet and over six months her weight fell by 14 kg to 38·2 kg (standard weight 50·3 kg). She reduced her insulin from 92 to 16 units/day in order to accommodate to the low carbohydrate intake. Menstruation ceased. She talked of feelings of intense guilt whenever she had glycosuria. On admission to a psychiatric hospital her weight was 39·4 kg. This increased steadily with a behavioural management programme. After 12 weeks her weight was 48·5 kg. Now, one year after discharge, her weight remains satisfactory, but she is still preoccupied with food and eating and remains amenorrhoeic.

(3) This patient developed diabetes when aged 17 years. She found the dietary restrictions difficult to accept but her management was straightforward. At 23 she narrowly escaped serious injury in a road traffic accident. After this and a broken engagement she began to have difficulty swallowing. Soon she took only fluids, her weight fell from 62 kg to 46 kg (standard weight 64 kg), and she ceased menstruating. Physical investigations were unremarkable and diabetic control remained satisfactory. Reluctantly she accepted admission to a psychiatric hospital. Her difficulty in swallowing rapidly resolved and her weight increased over two months to 49·9 kg. Since discharge her weight has increased and diabetic control remains satisfactory.

Comment

Interestingly, problems with diabetic control secondary to the low carbohydrate intake were infrequent in these patients. None developed hypoglycaemia or ketonuria. Apparently girls with anorexia nervosa can skilfully adjust their insulin dosage to match their greatly reduced carbohydrate consumption. But problems in psychiatric management arise when they use their diabetes as a powerful trump card in any confrontation with the psychiatric team. There are several possible explanations for the apparent rarity of the association. Conceivably the presence of a life-threatening condition may in itself reduce the chance of developing anorexia nervosa or externally imposed carbohydrate restriction lessens the likelihood of self-imposed restriction. Alternatively, the association may be much commoner than has been recognised, with many cases successfully managed by physicians.

We thank Professor R E Kendell and Dr B F Clarke for permission to report cases of patients under their care.

[1] Crisp AH. The differential diagnosis of anorexia nervosa. *Proc R Soc Med* 1977;**70**:685-90.
[2] Bruch H. *Eating disorders*. New York: Basic Books, 1973.

(*Accepted 5 February 1980*)

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Axillary hyperhidrosis, 20% aluminium chloride hexahydrate, and surgery

A highly selected group of 38 patients with axillary hyperhidrosis waiting for plastic surgery were treated with 20% aluminium chloride hexahydrate. Twenty-six of them requested surgery by the end of the sixth month.

Patients, methods, and results

Thirty women and eight men whose ages ranged from 18 to 41 years were treated with 20% aluminium chloride hexahydrate and a placebo on a double-blind basis. The solutions were applied on alternate nights. After 14 days whichever solution relieved symptoms was applied to the opposite axilla on alternate nights for 14 days, and when necessary to the axilla where relief had already been obtained. In all other respects the treatment was as outlined by Scholes *et al*,[1] who applied the solution initially for seven successive nights. Two patients defaulted during treatment and were excluded from the study.

Two groups were identified—a stress-positive group of 23 patients with symptoms exacerbated by emotion, and a stress-negative group of nine patients with severe symptoms that stress did not increase. The remainder could not be categorised. After two weeks 24 patients had obtained considerable relief with the active compound. The compound, however, was acceptable to only 19, and the remaining five opted for surgery. Six patients showed no improvement, two patients obtained relief with the placebo, and four obtained equal relief with both solutions. After six months only six out of the 19 patients with an effective initial response had sustained relief, 26 out of the original 38 had opted for surgery, nine required twice-weekly applications to maintain control, and one required an application every fortnight. One of the nine stress-negative patients was controlled with the active solution compared with nine out of 26 for the remainder. Pain and itch (which could not be correlated with the effectiveness of response) were unacceptable in 10 patients.

Comment

Relief of symptoms was excellent in 64 out of 65 of Scholes's patients treated with 20% aluminium chloride hexahydrate.[1] Our different results may be due to the following factors. Our trial was undertaken on all patients simultaneously, which eliminated seasonal variation in severity of symptoms. Our patients showed no significant thermal response (two claimed to be worse in the cold). Our severely affected patients may not have had the usual nocturnal inhibition of secretions, and thus their skin was never dry enough to prevent the formation of an acidic solution causing pain etc. Six patients (17%) showed a significant placebo effect (and this among a severely affected group). Scholes's patients were treated over a 15-month period, possibly for a wider range of severity, and some of them may have been near the time of spontaneous involution. Twenty (55%) of our patients had significant local reactions, which were unrelieved in 15 by hydrocortisone cream. Scholes *et al* recorded a reaction in 1·5% of cases. We modified the initial "loading" from Scholes's daily application to alternate days because of unfavourable reactions in five patients (not included in the trial). Shelley and Hurley[2] and Stillians[3] obtained effective relief with application on two successive nights and three applications on alternate nights, respectively. This and the initial good response in 19 of our own patients would seem to argue against the differing results being attributable to the different initial loading regimens.

Our results show that there is a group of patients with axillary hyperhidrosis who either cannot tolerate treatment with 20% aluminium chloride hexahydrate or will not respond to it. The results of surgery can be improved by excising the axillary skin with direct closure incorporating a Z-plasty in such a way that the transverse limb of the Z comes to lie in the apex of the axilla. This avoids a linear scar contracture. Relief of the condition more than consoles most patients for the appearance of stretched scars in the axilla.

[1] Scholes KT, Crow KD, Ellis JP, Harman RR, Saiman EM. Axillary hyperhidrosis treated with alcohol solution of aluminium chloride hexahydrate. *Br Med J* 1978;ii:84-5.
[2] Shelley WB, Hurley HJ Jr. Studies on topical anti-perspirant control of axillary hyperhidrosis. *Acta Derm Venereol* (*Stockh*) 1975;**55**(4):241-60.
[3] Stillians AW. The control of localized hyperhidrosis. *JAMA* 1916;**67**:2015-6.

(*Accepted 26 January 1980*)

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Corrections

Vitamin D supplements in pregnant Asian women: effects on calcium status and fetal growth

An error occurred in this paper by Dr O G Brooke and others (15 March, p 751). Table II, row 6 should have read "Heat-labile (non-placental) alkaline phosphatase activity (IU/l)."

Fluid deprivation due to Althesin solution affecting drop size

An error occurred in this article by Dr W J Wraight and Mr D Cox (29 March, p 904). The formula given in the article should have been described as the formula for determining drop volume, not drip rate.