Group Therapy of Obese Diabetic Patients

Joseph I. Goodman, M.D., Edward D. Schwartz, M.D., Leonard Frankel, M.D. CLEVELAND, OHIO

The reported incidence of obesity in diabetes mellitus in the United States ranges from 57.8 per cent[1] to 90 per cent or more of all patients.[2-8] The prevalence of obesity in this condition, added to the fact that the disease can be induced in animals by hyperalimentation, has led some authors to consider obesity an important etiologic factor in diabetes.[9]

Although there is no general agreement as to the criteria of good diabetic control it cannot be denied that the obese, middle-aged diabetic frequently becomes free from glycosuria or hyperglycemia after dietary restriction and weight loss. Sometimes the change seems tantamount to a cure;[2, 3; 11-13] all evidence of diabetes disappears and the laboratory findings remain normal as long as the ideal weight is maintained. Duncan has emphasized the important point that weight reduction by means of a low caloric intake is "the most satisfactorily effective manner of controlling the diabetes." It can be said in fact that overweight diabetic patients who reduce weight by caloric restriction show consistently good results, whereas those who fail to reduce show extremely poor results, with or without insulin. Even diabetics of normal weight show improvement in regard to the diabetes following loss of weight. Consequently, in obesity associated with diabetes, a low calorie diet is indicated even more than in obesity of nondiabetic patients.

The benefit of weight reduction in diabetes mellitus was the underlying basis of the important principle of undernutrition established by Allen in 1914.[14] Newburgh and his colleagues also presented convincing evidence to show the great improvement which occurs in diabetic patients after reduction of weight. Normal glucose tolerance curves were obtained in nearly 75 per cent of 35 cases in which there was reduction to an ideal weight level. Improved tolerance was observed in half the remainder and in some cases with lesser amounts of weight loss. When the patients regained the original degree of overweight the impaired carbohydrate tolerance was invariably re-established. Therefore, simple weight reduction not only decreases the hyperglycemia and glycosuria of diabetes, but also in many cases actually converts the glucose tolerance to normal. Conversely, the clinical symptoms of diabetes mellitus are apt to recur when the excess weight is regained.

Since a normal carbohydrate tolerance can be achieved in many obese diabetic patients by weight reduction alone it is safe to forego insulin until it is certain that diet alone will not bring about aglycosuria.[3c, 10, 11, 16, 17] Still, in actual practice diet treatment is frequently neglected and insulin prescribed instead. When obese patients are given insulin, without simultaneous insistance on dietary restriction, large doses (more than 100 units daily) of insulin may be required to correct even moderate hyperglycemia, although at least as good results can be obtained by diet alone. Moreover, patients are misled into the belief that insulin, not diet, is of primary importance to their welfare and, besides, they are subjected to a wasteful, unnecessary expense and the nuisance of frequent injections.

INDIVIDUAL THERAPY

The method generally employed in the treatment of obesity has been mainly pleading and exhortation mixed with threats of dire events. This approach meets with failure in a large percentage of cases. Recently, the appetite-depressant amphetamine drugs have come

Address communications to Doctor Goodman, 2460 Fairmount Blvd., Cleveland Heights 6, Ohio.

into vogue. Osserman and Dolger[10] reported significant weight loss in 36 of 55 cases of obesity and diabetes treated with d-amphetamine sulfate, but one-third of these patients regained their original weight after the drug was discontinued. Our results with the anorexigenic drugs have not been noteworthy.

It is fair to assume that attempts at weight reduction are unsuccessful in the average obese patient. Heretofore, in the Diabetes Clinic of Mount Sinai Hospital, our own results have been similarly unsuccessful. The patients, for the most part, were recalcitrant in following the recommended diets. Many of them remained obese for months and years, despite the persistent efforts of the attending physicians and dietitians.

GROUP THERAPY

One of us (J.I.G.) conceived the idea of group meetings with the sole purpose of re-emphasizing the importance of the diet in the treatment of diabetes. The role of diet in this disease had been stressed to these patients innumerable times and with those who comprised the initial group every other approach to dietary control had been exhausted. Essentially, it was an attempt to ascertain the effectiveness of group discussion in assisting these overweight diabetics, in whom all personal efforts had failed, to accept and adjust to the dietary restriction necessary to lose weight. Obviously, the prospects for attaining results in these particular patients were not bright. On our part, the effort to instill a better insight into the problems of overeating through a group approach was prompted solely by a desire to leave no stone unturned. The only requisite for membership in the group, other than the previous failure to lose weight, was mandatory weekly attendance.

RESULTS WITH GROUP THERAPY

Our first group was organized in September, 1949. Prior to the formation of these classes the patients had attended the diabetic clinic for periods ranging from one month to 15 years, with an average of 38.5 months. The Metropolitan Life Insurance Company "ideal weight" tables were utilized. At the onset a 1000 calorie diet was prescribed. Later the diet was curtailed to 900 calories. Successive groups were directed by each of the co-authors for periods of 12, 9 and 9 months respectively.

The duration of the weekly meeting is approximately one hour. Each session is introduced with a brief talk by the group leader on a subject such as the caloric value of foods, the role of the emotions in obesity, or the adverse effects of obesity. The subject of the day stimulates the group discussion. A line graph of each patient's weekly weight is posted on a bulletin board, the ideal weight being clearly demarcated, so that each patient is well aware of his goal and the progress he or she is making in this direction. We consider it of importance that a patient who has failed to lose weight in the preceding week is requested to explain his failure to the others and required to bring in for review a detailed food diary which is read aloud and debated. When the group has finished its "cross-examination," excuses usually prove to be invalid.

To date 33 patients, predominantly female, have participated in the group program. At the onset they weighed from 9 to 157 pounds above their ideal weights. The average attendance in the clinic prior to joining the group was 2.6 years per patient (ranging from one month to 15 years). Few had shown any appreciable weight loss on the previously recommended weight reduction regimes. On our group program, 30 patients lost weight and 3 failed, which represents 90 per cent success. The weight lost during the period of treatment varied up to 50 pounds; the average weight loss was 14.2 pounds. It is noteworthy that, in the main, the patients maintained the weight loss successfully, after completing the group treatment. Some of the first group have now gone over 1½ years without regaining weight.

The most striking single result of the group therapy is the consistent weight loss obtained in a high percentage of cases previously thought hopeless because of failure to lose weight during the regular clinic visits with other methods of approach. The difficulties encountered in this group were enhanced by the fact that most of them were elderly, uncooperative, and of low intelligence; many had language handicaps and economic and sociologic problems which made it difficult for them to follow the dietary regime.

A purposeful attempt was made to create a spirit of camaraderie, an attitude of friendship whereby everyone becomes his "brother's keeper." Each group member develops an intense personal interest in the others, and listens to their problems. The successful participants explain to the class just how they had lost weight during the preceding week. The rise of a competitive spirit is inevitable, each member being anxious to match the results of the others. Frequently, a patient will absent himself from a meeting being embarrassed to face the others until he shows a weight loss. It is not uncommon, after a chiding by the others, to hear

this statement: "I'll show I can lose 3 pounds." Almost invariably such a patient will proceed to lose weight by the next visit and return to gloat over the individual who had goaded him. The medical group leader attempts to instill into the members a feeling of intimate, friendly interest in their problems. This serves to arouse a desire to please the leader so that the attitude of "I have to lose weight to please the doctor" pervades.

In every class there are at least one or two patients who immediately accept the prescribed diet and lose weight, so that even at the outset those who have difficulty can be shown rather than told how this can be accomplished. The patient with an obesity problem is especially skeptical of the doctor's advice regarding weight reduction. Frequently, we have encountered cases in which the advice of a neighbor, friend, druggist or radio announcer is preferred to that of the physician. With group therapy, this information can be introduced under the surveillance of the group leader who then directs it into the proper channels. Also, through group discussion, the usual false beliefs such as "obesity runs in my family, everything I eat turns to fat" and other ingrained untruths can be eradicated by demonstrating weight losses in some of the group members.

A factor in obtaining good results by this method is the value of constant repetition of every pertinent point during the class discussions. This was exemplified in the case of patients of low intelligence who had been obese for many years. Although it seemed that they did not comprehend the discussion, they nevertheless lost weight.

Another important consequence of this form of therapy is the gratification felt by the group leader. On observing the excellent results in dealing with those who had been so unsuccessful previously, an obvious feeling of enthusiasm arises which is contagious and transmitted to the entire group. All of this intensifies the efforts of both the patients and the group leader to secure even better results.

COMMENT

Group therapy has aroused much interest recently in psychiatric and general medical circles. Widespread use of this form of treatment came as a consequence of military necessity and a shortage of personnel in the treatment of neuropsychiatric conditions in the military services during World War II. Afterwards, it was applied extensively in civilian mental hospitals, Veterans' Administration hospitals, and, more recently, in psychiatric clinics and private practice. Alcoholics Anonymous also employ this technic and the effective use of group therapy with morphine addicts has been reported. Apparently medical group psychotherapy was originated in 1905 by Dr. Joseph H. Pratt and has been practiced since 1930 in the Boston Dispensary's "Thought Control Clinic" for psychoneurosis.

As emphasized by Bruch[18] and well-known to most physicians, successful treatment of obesity depends on the cooperation of the patient. The patient who attends a clinic or sees his doctor regularly is more likely to adhere faithfully to a low calorie diet and obtain a satisfactory weight reduction. This opinion is supported by Hunter's[19] figures which show that only 687 (27.5 per cent) of 2,447 obese patients attended the London Hospital Clinic long enough to be benefited. Of those in regular attendance 93 per cent lost weight. Other data appear to show that, whereas up to 50 per cent or more of obese persons may lose an appreciable amount of weight, less than 20 per cent successfully maintain their weight loss. The rigid discipline of the reduction diet creates a serious problem in self-indulgent patients who have overeaten all their lives.

Seeking effective methods of weight reduction, a pilot study was set up recently (1949) in Boston by the U. S. Public Health Service in cooperation with the Massachusetts Public Health Department.[21] The New England Medical Center was chosen for this study because of its previous experience with group therapy. Twenty-six patients (nondiabetics) completed the course of treatment. At the beginning, they were from 4 per cent to 150 per cent overweight; the average number of pounds being 60. At the end of the treatment period the results varied from a gain of 2 pounds to a loss of 48 pounds. The average weight loss was 13.7 pounds; 19 of the 26 patients lost 10 or more pounds, an average loss of 15 pounds per patient.

Group therapy in dietary treatment has been reported rarely.[20] In a preliminary report of the present study the favorable results obtained in a predominantly older age group were presented.[22]

Among our obese diabetic patients lack of appeal was the most common cause of breaking the reduction diet; the more normal the diet the better its psychologic effect. A positive approach is introduced by providing the patients with specific information concerning their diet. To the leader falls the task of discussing the problems related to overeating in an atmosphere conducive to a free and informal discussion. This should be done in a quiet room with the doors shut, free from such interruptions as the telephone. Ultimately, an atmos-

phere of friendly assistance is created for the patient.

In a therapeutic group such as ours, the novice soon gains the feeling of security through his acceptance by the physician in charge and the other members of the group. With a better understanding of his emotional problems through discussion, his fears associated with overeating are diminished. Assured of support through the sharing of common knowledge the patient learns to test reality situations and the fear of failure is thus lessened. Persons laden with guilt are no longer unique or isolated. Also, the group members are encouraged in their reduction efforts by the exchange of information pertaining to their mutual difficulties and by the accomplishments of the others. As the members become accustomed to each other, the leader deflects their dependence from him to the others. Because the members of the class are suffering from similar difficulties, competition and mutual support develop. Diabetic patients have an added incentive in that insulin injections can usually be avoided by weight reduction. Probably, their fear of the complications of this disease tend to produce better results than in the cases of obesity without diabetes.

At the outset, the majority of our patients believed they already possessed all the knowledge necessary for them to lose weight. Soon it became obvious that they required more assistance and knowledge. Participation in the group activities and discussions assisted their understanding and acceptance of the general physiologic and psychologic causes of overeating. Re-education and the assurance that it is possible to lose weight on a diet which is nutritionally adequate, without weakness or any other untoward symptoms, and with good prospects of avoiding insulin, are important factors. The patient's desire to lose weight, a clear understanding of the necessity for weight reduction and a thorough explanation of the principles of the diet all contribute to the success achieved.

Considering the poor results obtained with the individual approach, the effectiveness of group therapy in our previously recalcitrant diabetic patients is noteworthy. The results can be attributed to several factors: 1) competition within the group; 2) the knowledge that failure to lose weight cannot be glossed over lightly; 3) the intense education efforts of the medical group leader. As one patient stated: "I lost weight this time because I felt more than ever that the doctor and others are taking a close personal interest in me and I wanted to do it for him." Group therapy has the disadvantage of being applicable only to relatively few patients at one time. Still, the method yields results in a large proportion of cases resistant to individual treatment. Our success with class discussion is attested to by weight losses, up to 50 pounds, in most of the 33 patients, the great majority of whom were considered recalcitrant beforehand. Some of them had been unsuccessful in attaining weight reduction by means of the usual forms of treatment over long periods of time, up to 15 years. Of 12 patients in our group who were taking insulin before joining the classes, 6 were able to reduce the dosage of insulin and 2 dropped it entirely, so that only 4 of the original 33 patients still required insulin. In Osserman and Dolger's series of 55 patients treated with the anorexigenic drugs, 84 per cent of the 31 patients taking insulin were able either to reduce the dosage or drop insulin entirely. The apparent contrast can readily be explained by the practice in our diabetic clinic, that is, to refrain from prescribing insulin except when there is ketosis, illness or other emergency, until it is clear that weight reduction will not correct the glycosuria. Consequently, based on the assumption that the diabetes would improve with weight reduction, most of our obese patients had not been taking insulin before.

SUMMARY

We believe our results can be attributed to the integration of practical dietetics and practical psychotherapy. The beneficial effects of class instruction illustrate how diabetic patients, by being brought together for free discussion, can solve a common problem without fear of derision. Competition creates a feeling of mutual understanding and confidence in the members of the group. In our opinion group therapy has opened a new avenue of approach to the successful treatment of diabetes mellitus.

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Treatment of Obesity as a Community Project

[*The Louisville Nutrition Committee undertook a weight control project as a community service in the Fall of 1951. A half dozen agencies joined forces in a broad educational attack upon obesity. The following excerpts reveal some of their methods and results.*]

Our logical and positive approach was by way of education, and a series of lectures and demonstrations was prepared for those interested in obesity and weight reduction. To stimulate interest through city-wide publicity, the local newspapers, the several radio stations, and the two television stations were most helpful in the successful launching of the program. Feature articles of interest in the daily papers, spot announcements regarding the weight reduction classes on the radio, and panel discussions and demonstrations on the television screen afforded considerable publicity.

In announcing the weight control classes to the public, notice was given to all that a physician's certificate was necessary for admission to any of these classes; such certification to indicate the need for weight reduction for reasons that would benefit the general health of the individual. This physician screening procedure aided in the detection of several cases not primarily due to overeating, insured optimal health in those participating in the program, and at the same time gained the approval and help of the medical profession generally.

Eighty-nine persons attended the first series of four classes extending over a period of three weeks. Seventy-seven or 86.1 per cent of these lost weight in significant amounts; two or 2.5 per cent maintained their initial weight, and one person gained weight. For this group the weight loss ranged between one-half and twelve and a quarter pounds for an average of five pounds per person during the first three weeks of the program. Follow-up studies were conducted at the end of 13 weeks with only 11 of the original 89 present. In this small group there was a 100 per cent individual weight loss, with the greatest loss amounting to 10 pounds and the smallest loss, one-half pound. At the end of 17 weeks 22 of the original 89 persons reported and 77.3 per cent had lost weight. One person had maintained weight and four had gained weight. The greatest loss was 22¼ pounds and the smallest loss, three pounds, giving an average of nine pounds loss per person. At the end of 26 weeks 19 of the original class were present; 79 per cent had lost, three persons had gained weight and one had made no change. The average weight loss was 11 pounds.

From *A Weight Control Program at the Local Level,* by John S. Llewellyn, M.D., Emily Bennett, Mary M. Hurley, M.P.H., and Mildred Neff, F.A. P.H.A., in the *American Journal of Public Health,* April 1953, page 433.