Weight Management and Obesity Symposium

Sasha Stiles, MD, Kaiser Permanente Hawaii, discusses approaches to treating severe obesity

Severe Obesity

By Sasha Stiles, MD

Introduction

As one becomes severely overweight, lifestyle becomes compromised. Comorbid conditions increase, and life expectancy decreases. Mobility decreases. Social acceptance plummets. Depression mounts and quality of life diminishes. To compound the issue, severely obese people have a statistically low probability of losing weight.

Despite all the negative consequences, severe obesity in the United States has increased tremendously within the last several years. Almost 5% of our population is severely obese[1] and would qualify for bariatric surgery according to National Institutes of Health (NIH) guidelines.[2] One patient explained it to me this way: "In my house, every person has their own refrigerator. When we are happy, we eat. When we are sad, we eat. When we get up, we eat. When we go to bed, we eat."

Comorbid Conditions: Type, Origin, and Prevention

Conditions associated with severe obesity are numerous and can be grouped into four general areas: metabolic, anatomic, degenerative, and neoplastic. Metabolic syndrome (also known as dysmetabolic syndrome, insulin resistance syndrome, or syndrome X) is now believed to affect 43.5% of people 60 to 85 years old. This syndrome includes the conditions of impaired glucose tolerance, Type 2 diabetes, dyslipidemia, nonalcoholic fatty liver, nonalcoholic steatohepatitis, cardiovascular disease, and hyperuricemia.[3,4] Pancreatitis and cholecystitis increase with obesity. The syndrome of renal failure of obesity has been identified. Sleep apnea is significantly increased in the severely obese, as is asthma. Venous insufficiency, thrombophlebitis, and incidence of nonhealing venous stasis ulcers increase as weight increases. Pain from osteoarthritis of weight-bearing joints devastates many severely obese people. Esophageal and abdominal cancer increases with obesity. And the list continues.

A once-common belief—that obesity represents a self-inflicted condition arising from a person's weakness—has been replaced by recognition that the etiology of obesity is complex and crosses the disciplines of basic science, clinical medicine, psychiatry, and behavioral medicine. We have learned that obesity is a precursor of many of the conditions we try to treat. If we could decrease or prevent severe obesity, we could ameliorate many of these conditions, which would extraordinarily affect quality of life and health care costs.

Treating Obesity

The NIH consensus report on overweight and obesity recommends bariatric surgery as an option that has had long-term success for patients with clinically severe obesity;[5] no other long-term maintenance program was recommended. The NIH stated that more research was needed into programs with a multidisciplinary approach to obesity that use a wide variety of dietary, exercise, behavioral, and other strategies. Although workable weight loss strategies may exist for people who need to lose 20 to 50 lbs, no strategy aside from bariatric surgery achieves statistical significance for severely obese people. Furthermore, most severely obese people have tried multiple diets and have lost significant weight only to regain it—and more.

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Nonsurgical Treatment of Severe Obesity

Before discussing bariatric surgery, which is statistically successful, let me review some nonsurgical approaches for severely obese patients. All multidisciplinary approaches should be viewed as pilot, or preliminary studies. Extensive further research is mandated.

Dr Vincent Felitti's vanguard work[6] on obesity as it relates to early childhood trauma is integrated into the Kaiser Permanente (KP) San Diego Positive Choice Program. An initial (20-week) very-low-calorie diet (VLCD) is paired with state-of-the-art interactive behavioral strategy. Group leaders use a playbook, developed and fine-tuned during the last 15 years, that includes standard behavioral approaches, dietary information, and exercise prescriptions. Participants in the Positive Choice Program also discuss early childhood trauma, in the second weekly group session. Theater arts therapists often lead the groups, and role-play-

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ing is spontaneous. After the 20-week program, many options for long-term maintenance exist.[7]

Although the Positive Choice Program offers a wealth of creative and stimulating ideas, it has not been rigorously tested. Program participants choose different options for long-term maintenance programs, options which have variable success and demographics, so conclusions about long-term maintenance have yet to be drawn to the satisfaction of the research community. However, it is time to give this vanguard work the attention it deserves.

Sami Alskaf, MD, Director of the KP Panorama City Obesity Treatment Center, has expanded the Felitti program in a systematic way through a freestanding business entity, which is used by KP physicians as a primary referral location for obesity services. Patients are placed into various programs: VLCD, pharmacotherapy, behavioral therapy, bariatric surgery, or a combination of programs. An onsite gym and a pickup service for healthy, low-calorie family meals are being developed. Again, long-term, research-driven maintenance protocols are outside the scope of this program. However, Dr Alskaf's business plan and programs deserve our rigorous review as potential prototypes for treatment of severely obese patients at KP.

Throughout KP, we have adopted systematic case management protocols for chronic diseases, protocols which include patient care registries. We need to develop a similar registry for cases of obesity and severe obesity. KP Hawaii, under Tom Vogt, MD, has submitted an NIH proposal to research long-term weight loss using therapy which includes VLCD, case management, and exercise—therapy that is solidly based on decision making and behavioral theory. Another study of potentially high value would use VLCD for initial weight loss followed by long-term behavioral therapy and pharmacotherapy. Until we understand the physiology of hunger and weight loss, we can reasonably assume that long-term pharmacotherapy will be necessary for a segment of our obese population.

The Trevose Behavioral Modification Program is a low-cost, long-term weight maintenance program that uses lay-facilitated weekly support groups. I call it the "tough love" approach. Participants who fail to maintain a prescribed weight loss must leave the program. After five years, 21% were still in the program, maintaining a mandatory 5% or more weight loss.[8] Although 5% may not sound like much, it is a national "best."

Surgical Treatment of Severe Obesity

This summary of treatment options brings us to bariatric surgery as an intervention for severe obesity. The outcome of this surgery varies between institutions and between procedures; however, a generally accepted statistic is that at least 50% of those who receive bariatric surgery maintain 50% of the excess weight loss for five years or longer.[9] [Excess weight is defined as the difference between ideal weight and preoperative weight.]

The rate at which bariatric surgery is performed is rising steadily. In 2002 alone, the KP Northern California Region conducted 1800 bariatric surgery consultations and did 300 bariatric operations; the rest were referred to non-KP facilities at considerable expense. KP Northwest did approximately 100 bariatric operations, all by laparotomy (open procedure). Group Health Cooperative Puget Sound and KP Hawaii each did approximately 100 bariatric operations, many of which were laparoscopic procedures. After Al Roker of "The Today Show" had the procedure, our waiting list in KP Hawaii grew from 75 to 150 patients. I would like to believe this was partially because of our excellent, multidisciplinary pre- and postoperative programs.

Although about six bariatric surgical procedures are currently performed, Roux-en-Y gastric bypass is preferred throughout the US. Open procedures have been done for 20 years. Long-term outcome is statistically similar between open and laparoscopic procedures, except for increased risk of incisional hernia after an open procedure. Laparoscopic procedures are more difficult and require a skilled laparoscopist. Once the requisite skill level is achieved, complication rate is comparable between the two procedures, and hospitalization and recovery times are shorter with laparoscopy. Reduced comorbidity after Roux-en-Y gastric bypass has been verified in many cohort studies.[10-12]

The 6 to 18 months after surgery is affectionately known by patients as "the honeymoon period." Weight falls off without much effort. Portion size is greatly restricted by the surgically decreased gastric volume. Patients call the frequent absence of hunger a true miracle; changes in ghrelin metabolism may be the cause of loss of hunger in the early postoperative period.[9] Later, the stomach stretches enough to allow one to eat more than necessary and still be comfortable. At this time, developing a new lifestyle is critical. As one of my patients said, "They did surgery on my stomach but not my brain." Emotion-driven eating habits return as hunger returns and the stomach stretches.

However, as noted before, studies[9] show that postoperatively a mean of 50% excess weight loss is maintained long term. This statistic is remarkable considering the preoperative degree of metabolic, clinical, and psychological morbidity in this high-risk popula-

tion. Again, we advocate use of multidisciplinary programs that work with patients pre- and postoperatively to foster long-term success.

The composition of KP bariatric surgery programs varies widely between regions. In the larger regions, demand for surgery is so high that little time is available to fine-tune program components. Performing 100 bariatric operations a year, our KP Hawaii program is fortunate to have created an excellent team. Patients see our medical bariatric consultants and behavioral specialist; attend structured dietary classes and weekly lay-facilitated, behaviorist-supervised support groups; work with a physical therapist; and have their comorbid conditions diagnosed and stabilized before surgery. Diabetic patients visit with diabetic educators to help decrease high blood glucose levels, thereby decreasing incidence of wound infection. We attend to sleep disorders, eating disorders, and cardiac problems. However, we do not automatically require orthopedic consultation when 400 lb patients complain of severe knee pain.

We expect all patients to demonstrate that they can adhere to a long-term program. We work with them for six months before surgery and expect them to lose weight preoperatively. In KP Hawaii, we do not specify a percentage of excess weight loss, but the KP Northern California Region recommends a 10% loss before surgery.

Regional programs are at different stages in developing long-term postoperative protocols. The trend is for indefinite metabolic follow-up of bariatric surgery patients with review of clinical laboratory test results every 6 to 12 months. Most programs offer group support indefinitely, and some require patients to visit a primary care provider or a bariatric medical specialist indefinitely. The general consensus is that this high-risk group requires long-term monitoring.

The NIH guidelines are purposely vague in several ways, because no evidence exists that compels them to be specific. The guidelines do not always specify criteria for defining comorbidity. For example, do we presumptively diagnose osteoarthritis in a patient who weighs 400 lb and whose knees hurt? Or does the patient require diagnostic evaluation and orthopedic consultation? However, we are not likely to see a new set of guidelines for another five years. The National Institute of Diabetes & Digestive & Kidney Diseases recently sent out a request for applications for grants to fund five research centers and one data collection site that will gather evidence to inform more definitive parameters for bariatric surgery. At least one KP region will submit an application to qualify as a research center.

The criteria for entry into our bariatric surgery program may differ from other KP regions; and although the NIH guidelines are intentionally vague, many KP programs are passionate about their entry criteria. Addressing the merits of each set of guidelines is beyond the scope of this discussion. As yet, neither KP nor the NIH has enough evidence to identify best practice. However, for the majority of KP regions, consensus criteria for bariatric surgery eligibility appear to be the following: body mass index (BMI) of 35 to 40 and a severe, life-threatening comorbid condition; or BMI of 40 to 50 and significant, although not life-threatening, comorbidity; or BMI greater than 50. Please note that this is a statement of general consensus, not a Programwide standard. Qualifying comorbidity standards vary between KP regions.

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Predicting Long-Term Success

What predicts successful long-term weight loss? McGuire et al[13] looked at multiple attributes of patients before and after weight loss and weight regain. Coping skills did not change from baseline for those who lost weight or those who regained it. Instead, from the outset, those who lost weight had a different set of coping skills and showed less binge-eating behavior, less dietary disinhibition (lack of intake control while eating), and less depression. In addition, those who regained weight reported markedly less long-term participation in exercise programs. The authors[13] found also that subjects who began regaining weight early had less long-term success.

Perri et al[14] found that after completing treatment for addictive behavior, clients remained susceptible to relapse when faced with stressful circumstances. However, a program of extensive physical activity, peer-group engagement, and therapist intervention showed promise in promoting long-term weight loss success.

Cook[15] described habits that predict success after bariatric surgery: personal accountability (ie, weighing oneself at least once per week); portion control; proper nutrition, including vitamins and hydration; and regular exercise. I would add three more habits—no snacking, eating breakfast, and eating slowly—to that list.

Many of the same issues any person may face can affect long-term success for bariatric patients. Family dysfunction; previous emotional, physical, or sexual abuse; and eating disorders must be addressed. Distressing life events occur. Families are still dysfunctional. Other forms of addiction may surface: drugs, alcohol, smoking, exercise, gambling, shopping, and others. Continued treatment of addictive behavior represents an ongoing struggle for many bariatric patients.

Finding reasons for an addiction goes far beyond behavioral modification strategies and perhaps beyond the scope of most weight loss programs as well. Dr Felitti would tell us that unless we solve these deeper issues, weight regain is highly likely.

Bariatric surgery patients have a slight long-term advantage over those who lose weight by other means, because they experience continuous, surgically induced malabsorption, and many are never able to eat as much at one time as before surgery. The metabolic consequences of dumping syndrome (gastrointestinal symptoms resulting from rapid gastric emptying) also favor long-term success of bariatric surgery patients compared with patients who do not have surgery. Although the long-term consequences of bariatric surgery give these patients a certain metabolic advantage over patients who lose weight without surgery, much of the premorbid disposition for both groups remains similar and needs to be addressed. Both require well-thought-out strategies for long-term behavioral, dietary, psychological, exercise, and group support.

Care Management Institute Helping Severely Obese KP Members

KP, through CMI, brought together members of our bariatric community from each KP Region into a Severe Obesity Workgroup that has met for more than a year. Under the direction of Trina Histon, we have completed our initial task of developing a source book of all regional protocols and program components. Now we are beginning to identify and collect key clinical indicators to illuminate important facets of bariatric surgery programs. We will be working with other CMI groups to develop nonsurgical programs to treat severe obesity. We are developing a primer for primary care providers to use as a guide for treating bariatric surgery patients. Later, we intend to develop a KP standard for bariatric surgery that we hope will gain national respect and recognition. Our position will be developed on the basis of the best existing evidence and, moreover, coordinated and well-documented experiences resulting from the full participation of all KP regions.

To cure this disease will take an extraordinary new breed of linked therapies.

The rise in obesity in America is epidemic. The implications for HMOs and for use of the health care dollar in general are alarming. Severe obesity is a disease process gaining hold in a society which has become dependent on mechanical devices for transportation and pleasure. As the social fabric of our populations disintegrate, this dysfunction turns to food as a primary relationship. To cure this disease will take an extraordinary new breed of linked therapies. This article is only the beginning of this author's exploration into what must be created … quickly! ❖

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