

A History of Bariatric Surgery

The Maturation of a Medical Discipline



Adam C. Celio, MD, Walter J. Pories, MD*

KEYWORDS

- Bariatric • Obesity • Metabolic surgery • Intestinal bypass • Gastric bypass
- Gastric sleeve • Gastric band • Gastric balloon

KEY POINTS

- The history of bariatric surgery, one of the great medical advances of the last century, again documents that science progresses not as a single idea by one person, but rather in small collaborative steps that take decades to accept.
- Bariatric surgery, now renamed “metabolic surgery,” has, for the first time, provided cure for some of the most deadly diseases, including type 2 diabetes, hypertension, severe obesity, NASH, and hyperlipidemias, among others, that were previously considered incurable and for which there were no effective therapies.
- With organization, a common database, and certification of centers of excellence, bariatric surgery, once one of the most dangerous operations, is now performed throughout the United States with the same safety as a routine cholecystectomy.

RECOGNITION

Obesity is now a worldwide public health problem, an epidemic, with increasing incidence and prevalence, high costs, and associated comorbidities.¹ Although the genes from our ancestors were helpful in times of potential famine, now in times of plenty, they have contributed to obesity.^{1–4} The history of obesity is related to the history of food; the human diet has changed considerably over the last 700,000 years. Our ancestors at one time were hunter-gatherers, consuming large and small game along with nuts and berries. Their diets were high in protein and their way of life was strenuous; they were well suited for times of famine. Those able to store energy for long periods of time survived and passed on those genes.² About 8000 years ago, the development of farming allowed people to consume diets that were mainly complex

Disclosure Statement: The authors have nothing to disclose.

Department of Surgery, Brody School of Medicine, East Carolina University, 600 Moye Boulevard, Greenville, NC 27834, USA

* Corresponding author.

E-mail address: poriesw@ecu.edu

Surg Clin N Am 96 (2016) 655–667

<http://dx.doi.org/10.1016/j.suc.2016.03.001>

surgical.theclinics.com

0039-6109/16\$ – see front matter © 2016 Elsevier Inc. All rights reserved.

carbohydrates (wheat and barley).³ More recently, sedentary lifestyles and the development of high-calorie fast foods with high levels of carbohydrates, saturated fat, and salt have contributed to the rise in obesity.³

Obesity became much more common and apparent in the 1900s as society progressed. Initially, medical means were used to attempt to help patients lose weight, dating back as far as the 1920s.⁴ The results from the earliest attempts were largely unsuccessful and the patients that did achieve weight loss had great difficulty in maintaining their weight.^{4,5} Medical modalities for treatment of obesity, namely a low-calorie balanced diet, anorectic drugs, behavioral therapy, and exercise, had little or nothing to offer most morbidly obese patients.⁵

The most important breakthrough in the history of bariatric surgery, that is, that surgery should be considered as a treatment of obesity, is too often forgotten. Although there are a few cultures, such as Hawaiian royalty, in which obesity was considered a sign of power, much of the world, especially in the United States, equates severe obesity with a lack of control. That bias is reflected in the difficulty millions of obese people have in finding such basic things as employment and acceptance in society.⁶ Even today, there is great reluctance in admitting that medical therapy (ie, diets, behavioral modification, exercise, and drugs) fails, almost universally, in patients who are severely obese.

DEVELOPMENT OF PROCEDURES

The failure of medical therapy for severe obesity and the success of surgery has, over the last six decades, produced a remarkable series of new techniques and procedures for the treatment of obesity and its comorbidities. Bariatric operations have traditionally been divided into three groups based on their mechanism of weight loss production. Malabsorptive procedures induce weight loss totally by interference with digestion and absorption. Restrictive procedures produce weight loss solely by limiting intake. Mixed malabsorptive and restrictive procedures limit intake and produce malabsorption.⁷ **Fig. 1** provides a diagrammatic overview of the operations currently in use and others for historical consideration. The following discussion of bariatric operations provides an overview. Multiple variations of each of the operations have been performed and discarded during the last 60 years with variations in, for example, the size of gastric pouches, length of limbs, type and size of anastomoses, and the use of vagotomy.

Malabsorptive Procedures: Intestinal Bypass

Surgeons have long known that shortened gut could lead to substantial weight loss.⁸ The first application of these observations, the surgical treatment of obesity for the purpose of improving comorbidities, was in 1952 by a Swedish surgeon, Dr Viktor Henrikson. He noticed that small bowel resections performed for other disease processes usually produced no change in the patient's general status but, in some cases, resulted in significant weight loss.⁹ Based on his observations, he resected 105 cm of small intestine from a 32-year-old obese female who could not complete a weight loss program. Interestingly, the patient lost only a small amount of weight but was noted to have an improved quality of life.⁹ Although this was the first reported operation for obesity, it was not adopted for treatment in other patients because of its irreversibility. It would take the development of a reversible procedure for widespread adoption.

Surgeons in the United States were also investigating ways to shorten the intestines as a treatment of obesity and developed the intestinal bypass. Dr Varco, at the University of Minnesota, performed the first jejunoileal bypass (JIB) in 1953.⁸ Kremen and

Download English Version:

<https://daneshyari.com/en/article/4310536>

Download Persian Version:

<https://daneshyari.com/article/4310536>

[Daneshyari.com](https://daneshyari.com)