FEATURE

Honoring Dr Edward Mason, the Father of Bariatric Surgery

Written by Jill Shuman

For decades, bariatric surgery has taken flight due primarily in part to the vision of Edward E. Mason, MD, PhD, who performed the first gastric bypass in the United States and was instrumental in establishing the American Society of Bariatric Surgery in 1983. To better reflect the mounting clinical evidence demonstrating the effectiveness of surgery on metabolic diseases, the name was changed to the American Society of Metabolic and Bariatric Surgery (ASMBS) in 2007. Dr Mason was also the principal force behind the International Bariatric Surgery Registry (IBSR), which has accrued > 30 000 patients since its inception in 1986. The purpose of the IBSR is to enable bariatric surgeons to evaluate and improve their expertise and benefit from the combined experience of all participants [Mason EE et al. *Obes Surg.* 1997]. Dr Mason conceived of the registry because "you can't analyze data unless you have it." Indeed, development of the centralized IBSR continues to provide standardized clinical data collection and analysis for the surgical treatment of obesity.

Since 1989, an anticipated feature of the ASMBS Annual Meeting has been the presentation of the Edward Mason Lecture, delivered by a distinguished surgeon chosen by his or her peers. For the first time, the 2014 lecture was delivered by Dr Mason himself. Dr Mason presented the lecture as a prerecorded telecast during which he shared his thoughts regarding the changes and growth in metabolic and bariatric surgery over the past 45 years. In it, he urged his colleagues to take leadership roles in pursuing solutions for the treatment of obesity and type 2 diabetes mellitus (T2DM).

As a young surgeon at the University of Iowa in 1966, Dr Mason performed the first gastric bypass (currently known as the Roux-en-Y bypass) to induce weight loss. This was a revised procedure based on a partial removal of the stomach, commonly performed at that time on patients with gastric ulcers. While the older procedure did not necessarily cure the ulcers, a notable amount of weight loss occurred. Dr Mason then realized that stapling the stomach and bypassing the small intestine—rather than removing parts of the stomach—would be a safer way to stimulate weight loss in obese patients who had virtually no other clinical options.

Peer-Reviewed Highlights From

ObesityWeek

November 2–7, 2014
Boston, MA

In his lecture, Dr Mason described the impetus for creating the ASMBS, which resulted from a trip to Japan in 1981 where he had been asked to help establish the Obesity Society of Japan. Recognizing the pressing need for an association of this type within the United States, he went on to found the ASMBS. Its mission was to encourage clinical and laboratory investigations; encourage sharing of ideas and experience; provide guidelines, education, and outcomes data; and ensure quality. The ASMBS was founded in 1983, with 70 surgeons "teaching each other" about new obesity procedures and the patient care required pre- and postoperatively. This was followed by creation of the IBSR in 1985. Participation in the registry was voluntary and provided an opportunity for surgeons who wished to share "real-world" data about their surgical outcomes and promote quality improvement in patient care.

Dr Mason went on to emphasize the importance of the data provided by the registry. He believes that, too often, empiricism guides the selection of operations for the treatment of obesity and T2DM. Bariatric surgeons need to know much more about the scientific basis of these surgeries, how the digestive tract determines the concentration of what is swallowed pre- and postsurgery, and how this influences plasma glucose. This requires an understanding of tonicity, osmolality, and dumping syndromes that typically occur after gastric bypass and sleeve gastrectomy.

According to Dr Mason, the ultimate goal of surgeons should be to eliminate the need for complicated surgical procedures. However, this can be accomplished only if one is committed less to empiricism and more to scientific study. As an example, he cited the resurgence of stomach resection (sleeve gastrectomy) as a popular bariatric procedure, despite the inherent risks of a long

staple line that extends from the esophagus to the duodenum and the fact that the procedure is not reversible in and of itself. Instead, he hypothesized that surgeons who have studied the research could perform a gastric fundus invagination, whereby a piece of the gastric fundus is invaginated inside the gastric lumen; a small piece of the fundus is then removed when it is anastomosed to the gastric antrum [Darido E et al. *Obes Surg.* 2012]. This novel procedure avoids resection of the stomach, minimizes gastric dumping, is reversible, and eliminates the complications of a long stapled sleeve. He urged surgeons to investigate this procedure as a reversible, safe, and simple option for children and adolescents, as well as those with T2DM.

Dr Mason emphatically reinforced that bariatric surgeons are not just physicians who operate. They must also be metabolic experts, to help patients who cannot undergo surgery. As such, they must study the literature and make decisions related to their patients based on science rather than empiricism—particularly in the area of T2DM. Surgeons should be involved in the study of glucagon-like peptide 1 (GLP-1) secretory stimulants that are not absorbed and are able to reach the distal bowel. Dr Mason reiterated that T2DM reversal following gastric bypass is due to the resultant hyperosmolar flushing and exposure of the distal bowel to glucose and other stimulants of L-cell secretion of GLP-1. GLP-1 is the hormone required to decrease insulin resistance. Because T2DM is GLP-1 dependent, it should also be considered a disease of the digestive tract. Bariatric surgeons must understand the normal dumping mechanisms and how glucose mimetics could reach the L-cells in the distal bowel and prevent or resolve T2DM without surgery.

Dr Mason closed his talk with a plea that his colleagues consider paradigm shifting toward a peaceful confluence of views based on scientific disciplines and not empiricism. He reminded colleagues: "Keep it simple, surgeon—and reversible if possible."

The editors would like to thank the many members of the 2014 Obesity Society and the American Society for Metabolic and Bariatric Surgery presenting faculty who generously gave their time to ensure the accuracy and quality of the articles in this publication.