# Bariatric Surgery Newsletter

CENTER FOR SURGICAL TREATMENT OF OBESITY 3200 S. Susana Rd., Suite 200, Compton, CA 90221 Phone: (213) 603-0116

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## ADULT ONSET DIABETES CONTROLLED BY SURGERY

A.P., 34 year old female with three years history of adult onset, difficult to control, insulin dependent diabetes mellitus, required 60 units of insulin NPH daily with regular insulin supplements during the day based on her urine sugar. Ms. A.P. is also 5'6" tall and weighs 267 lbs. Her ideal weight for her age, sex, and body frame is 130 lbs. thus making her 137 lbs. above her ideal weight or greater than 200% her ideal weight. Ms. A.P. sought consultation at the Center for Surgical Treatment of Obesity because she had failed in non surgical efforts at controlling her weight. During her evaluation, her random blood sugars ranged between 260 mg% and 300 mg% in spite of her following her diabetic medicine routine as instructed. Ms. A.P. was evaluated and cleared for surgical intervention for her obesity. She was hospitalized for five days, during which time she had a Vertical Banded Gastroplasty. Her blood sugar during hospitalization was controlled with sliding scale insulin. On discharge from the hospital her fasting and random blood sugars were between 122 and 150 mg% on no medications. She has subsequently been followed after discharge and her random sugar has stayed below 130 mg%. This dramatic change occurred with minimal weight loss. She is also progressively loosing weight.

Similarly, Ms. R.W., 44 year old female, 5'6" with a weight of 290 lbs. with adult onset diabetes, also on 60 units of NPH insulin with regular insulin supplements during the day sought surgical treatment for her obesity. Ms. R.W. had a severe perineal fungal rash extending from her pubic crest to the area above her coccyx which was resistant to all treatments. She wore a diaper all the time and had not had any sexual intercourse for more than six months because of her condition. Ms. R.W. was admitted to the hospital prior to surgery for control of her diabetes because her fasting and random blood sugars on an outpatient basis was always greater than 300 mg%. The blood sugar was maintained below 150 mg% with IV Insulin continuous drip, during which time she had a Vertical Banded Gastroplasty performed. Her total hospital stay was fourteen days and she was discharged home on 8 units of Insulin NPH a day. At this time she is on no medications. Her random fasting blood sugars are below 150 mg%. Her perineal rash resolved completely. Her weight loss is only 40 lbs. because she is only three months after her surgery. She says she feels like a different person and ten years younger.

The two case reviews illustrate a finding we have observed at The Center for Surgical Treatment of Obesity. Adult onset diabetics, chemical, oral hypoglycemic dependent or insulin dependent, become normaglycemic requiring no medications after they have had any gastric reduction procedure that severely limits their caloric intake. This effect is seen without significant weight loss and improves with weight loss. We have also noticed that patients who had a gastric reduction procedure and lost significant weight but developed staple line dysruption or stomal dilation, became suddenly hyperglycemic again and start exhibiting symptoms of diabetes in spite of the significant weight loss. This observation has led us to the following conclusions:

1) Adult onset diabetes is most frequently associated with obesity.
2) The hyperglycemia in adult onset diabetes is mostly a factor of oral caloric intake.
3) Significant caloric intake reduction, with or without weight reduction will control the hyperglycemia of adult onset diabetes.
4) Surgical treatment for obesity using gastric reduction procedures which are effective by reducing the caloric intake appear to be the most effective and definitive modality to affect this control at this time.

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(Continued from Pg. 1)

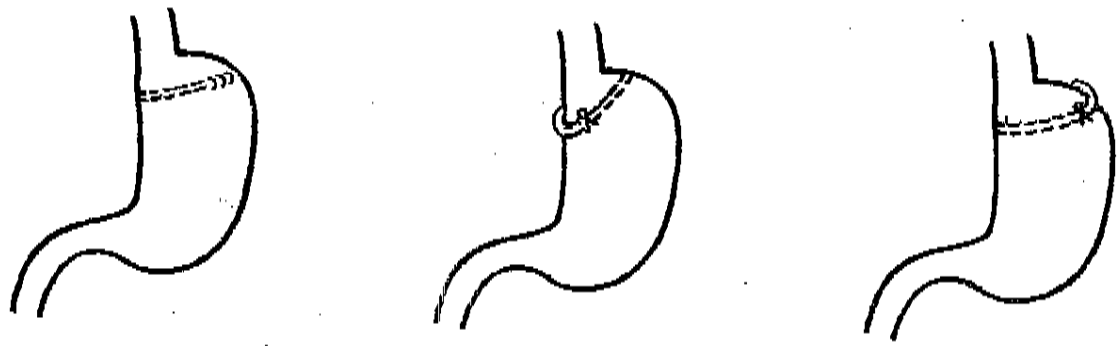
Ninety per cent of the 10 million diabetics in America today are adult onset diabetics. It is estimated that 70% or more of these are associated with obesity. It is well documented that most of the complications of diabetes are due to the hyperglycemia. How effective are the non surgical means of controlling the hyperglycemia, what is the long run cost, what are the complications, what is the overall effect on the quality of life? Insulin dependent adult onset diabetics, who are obese, generally gain more weight while on insulin.

The care of the adult onset diabetic entails one of several modalities, oral hypoglycemia agents or insulin, dietary control, diabetic education, frequent blood tests, daily urine sugar test and usually care for the other complications that result from the hyperglycemia due to the suboptimal control that is being achieved. Is it possible, or more probable, that diabetologists will one day consider the use of the gastric reduction, caloric intake reducing, surgical procedures as the treatment for the poorly controlled, adult onset diabetic, who is obese, but not necessarily 100 lbs. above the ideal weight. Obviously, the risk of surgical intervention must be weighed against the risk of the nonsurgical treatment. The most recent modification of the gastric reduction procedure, the Vertical Banded Gastroplasty has such a low morbidity, a high effectivity in controlling caloric intake, and no foreseeable long term side effects, that it is probable that in the not too distant future, poorly controlled adult onset diabetes associated with obesity will be referred for surgery. If clinical findings at other centers where bariatric surgery is performed are similar to ours, as observed during the last four years at The Center for Surgical Treatment of Obesity, it may just be that we now have the best means to control adult onset diabetes associated with obesity, surgically.

## SURGICAL TECHNIQUE
## GASTROPLASTY

Mason described and used the first gastroplasty in 1969 in his attempt to avoid some of the inherent complications of the gastric bypass procedure. He abandoned this procedure because of poor results in 1971. Cesar Gomez in 1977 rekindled the interest in Gastroplasty with his description of the modification to provide against stomal dilatation with a Proline Seromuscular Suture Ring at the stomal outlet. Other modifications of the gastroplasties involved silastic or silicon rings that provided external stomal support. Kroyer described the horizontal gastroplasty with outside Marlex support which was ultimately adopted and modified by Mason in 1980, to the Vertical Banded Gastroplasty. De-Lucia has been performing a lesser curvature gastroplasty with partial transection of the stomach and with external Silastic Support for more than four years. All the modifications illustrated are in current use except for Masons original gastroplasty. Gomez has abandoned his modification but there are still many surgeons performing it. The biggest problem with the gastroplasties has been erosion of the nonabsorbable stomal support into the Lumen causing obstruction and reoperations. Mason's Vertical Banded Gastroplasty avoids this problem by not incorporating the Marlex band either as part of the staple line or the stomal wall. At this time no case of Marlex erosion into the Lumen has been reported. At The Center for Surgical Treatment of Obesity, we now use exclusively the Vertical Banded Gastroplasty. The weight loss is not as rapid as with the gastric bypass procedure, nor is it as much at one year follow up. However, the perioperative complications and so far the long term complications are significantly less.

## MODIFICATIONS OF THE GASTROPLASTY

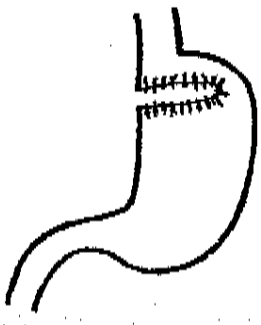


Gomez Gastroplasty

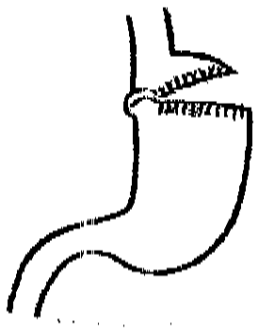
Vertical Gastroplasty with Silastic Ring

Horizontal Gastroplasty with Silastic Ring

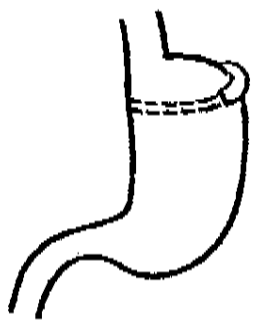
## MODIFICATIONS (Cont'd.)



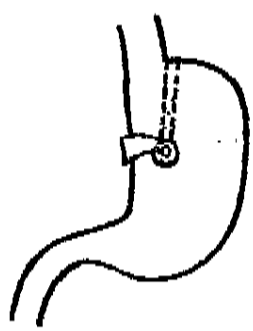
Mason's Original Gastroplasty



De-Lucia's Gastroplasty with Partial Transection



Kroyer's Horizontal Gastroplasty with Marlex Mesh



Mason's Vertical Banded Gastroplasty with Marlex Mesh

## SECOND ANNUAL SYMPOSIUM ON SURGICAL TREATMENT FOR OBESITY

The Second Annual Symposium on Surgical Treatment for Obesity is planned for February 2nd & 3rd, 1984, at the Airport Park Hotel in Los Angeles, California. This symposium will feature guest faculty who have made significant modifications and contributions in the field of Bariatric Surgery. The speakers will discuss in detail their particular modifications with the results and outcome. Some of the speakers no longer use the procedure they invented or popularized, but their are still many surgeons who have adopted the modifications and are still using them. This symposium should be of interest not only to the bariatric surgeon, but also to bariatricians, other physicians, nurses, dieticians, and hospital administrators who increasingly will receive requests for privileges to perform bariatric surgery at their hospitals. Topics to be covered will include:

1) Intestinal Bypass Surgery - A 34 Years Experience.
2) Obesity - Is it an Illness? What is Morbid Obesity?
3) Overall Overview of Nonsurgical Treatment of Morbid Obesity.
4) Gastric Bypass Surgery for Morbid Obesity.
5) Gastric Partitioning for Morbid Obesity.
6) Gastroplasty for Morbid Obesity.
7) Vertical Banded Gastroplasty for Morbid Obesity.
8) Gastric Wrapping for Treatment of Morbid Obesity.
9) Gastric Banding for Treatment of Morbid Obesity.
10) Biliopancreatic Bypass for Treatment of Morbid Obesity.
11) Gastric Partitioning with Gastrogastrostomy for Treatment of Morbid Obesity.
12) Fat Suctioning - Is it a Treatment Modality for Morbid Obesity?
13) Intragastric Baloon Implantation - Does it Have a Place in the Treatment of the Morbidly Obese?
14) Reoperations after Gastric Procedure for Obesity.
15) Plastic Reconstructions after Obesity Surgery.
16) Metabolic Changes after Gastric Surgeries for Obesity.
17) Safeguarding Gastric Surgery for Obesity.
18) What Has Happened to Those Who Have Had Gastric Surgery for the Control of Their Obesity?

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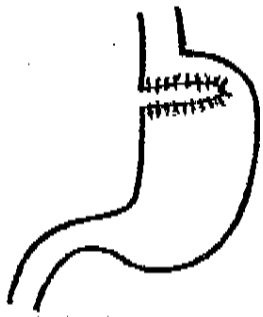
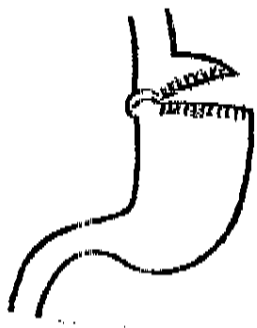
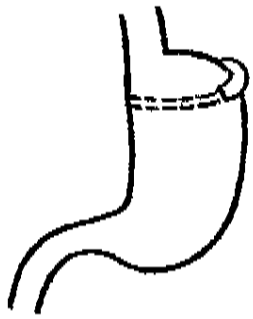


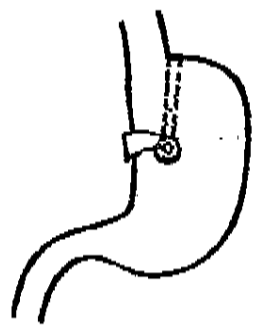
Mason's Original Gastroplasty



De-Lucia's Gastroplasty with Partial Transection



Kroyer's Horizontal Gastroplasty with Marlex Mesh



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