SEARCH





COMMENTARY

# Ganta: Surgery holds promise in treatment of diabetes

## Dr. Sashi Ganta, LOCAL CONTRIBUTOR

Monday, August 06, 2007

Can surgery cure diabetes? Ask June Watson. Watson, a 22-year-old UT graduate student, was diabetic and 68 pounds overweight. After undergoing gastric bypass surgery, she was off all medications in two weeks. She says the surgery saved her life.

Diabetes affects about 250 million people worldwide. A third of the estimated 21 million Americans who are diabetic have not yet been diagnosed. Being overweight increases the chances of becoming diabetic tenfold. For those who are obese, the risk of becoming diabetic increases 30 fold. Each year, 225,000 deaths are reportedly caused by diabetes in the United States.

MOST POPULAR STORIES

- Laura Hall gets 5 years in state prison
- Golden: More close games on the horizon for Texas
- TCU doesn't see itself as underdog
- More than 40 dogs removed from Round Rock home
- Man held on drug charges dies in jail

SHARE THIS STORY

del.icio.us digg Newsvine reddit Yahoo! Facebook

What's this?

Medical management is the mainstay of diabetes treatment, but medication-related complications could be significant. A recent study suggests increased risk of heart failure in adults even with no pre-existing cardiac disease with the use of common diabetic medications Avandia and Actos.

The results for Watson are typical. Published data indicates an 85 percent to 98 percent cure rate in obese patients with diabetes who undergo weight loss surgery involving a bypass. More interesting than this statistic is the fact that the diabetes resolution is evident within a couple of weeks after the surgery. Patients are off all medications maintaining perfect sugar levels and long before experiencing any meaningful weight loss. Scientists believe that nutrients bypassing the first few feet of the small intestine following surgery change the glucose metabolism and patients experience either cure or an improvement of the diabetes.

So, does that mean that the same surgical principles be applied to normal weight patients and cure diabetes without the weight loss? The answer is "most likely." Gastric bypass surgery performed with keyhole size incisions is the most common procedure with a diabetes resolution rate of 85 percent. Not as well known is a procedure called the duodenal switch. That procedure is also performed with keyhole size incisions — with a diabetes resolution rate of 98 percent.

Why the disparity in cure rates? Recent experiments suggest two hypotheses for diabetes. "Foregut hypothesis" explains that the very first portion of intestine called duodenum has complex hormonal regulation that is responsible for diabetes through unclear mechanisms. Both of the surgical procedures bypass the duodenum and therefore alter the foregut mechanism. "Hindgut hypothesis" explains that when the distal small intestine receives unprocessed nutrients faster, it triggers different hormonal mechanisms and results in improved blood sugar control. Only the duodenal switch utilizes the hindgut mechanism and therefore the better diabetes cure rate.

A modified version of the duodenal switch called "duodeno-jejunal bypass" performed in animal experiments by Dr. Francesco Rubino resulted in cure of diabetes in all animals. The results were duplicated in a few non-obese diabetic humans in Italy and Brazil utilizing the same procedure.

If the duodeno-jejunal bypass is proven successful consistently in resolving diabetes, the future of 250 million diabetics worldwide and 500 million more pre-diabetics will be a lot brighter. It would be the biggest discovery since penicillin.

The way we look at and treat diabetes would be changed forever. The global impact in number of lives saved, quality of life, reduced health care costs would be colossal.

The next two years will shape the future of diabetes care since this procedure provides the most promise we ever had to cure diabetes.

Ganta is a bariatric and laparoscopic surgeon in Austin. Contact him via e-mail at sashiganta@yahoo.com.