Weight loss surgery can significantly improve migraines: study

March 28 2011

Bariatric surgery may provide an added benefit to severely obese patients besides weight loss: it can also help alleviate the excruciating pain of migraine headaches, according to new research from The Miriam Hospital, published in the March 29, 2011 issue of *Neurology,* the medical journal of the American Academy of Neurology.

Researchers say obese patients who had suffered painful and debilitating migraines before bariatric surgery reported improvements in headache frequency, severity and disability just six months after surgery. At that point, most patients had lost an average of 66.4 pounds.

"Obesity is thought to contribute to worsening of migraine, particularly for severely obese individuals, yet no study has examined whether weight loss can actually improve migraine headaches in these patients," said lead author Dale Bond, Ph.D., a researcher with The Miriam Hospital's Weight Control and Diabetes Research Center. "Our study provides evidence that weight loss may be an important part of a migraine treatment plan for obese patients."

It is estimated that approximately 28 million Americans – mostly women – suffer from migraines. They are thought to be caused by abnormal brain activity, which is triggered by stress, certain foods, environmental factors, or other factors, although the exact chain of events remains unclear. Migraine pain is usually moderate to severe, often described as pounding, throbbing pain often felt on only one side of the head. Headaches can last from four hours to three days and usually occur one

to four times per month. Migraine symptoms include nausea, vomiting and light sensitivity. There is no specific cure for migraine headaches although certain medications can help reduce the number of attacks.

The Miriam study included 24 severely obese patients who suffered from migraines. The majority of participants (88 percent) were female, middle-aged and severely obese, with an average BMI of 46.6 prior to surgery. More than half of all patients underwent laparoscopic gastric banding surgery; the other participants chose Roux-en-Y gastric bypass. At six months, the average BMI was 34.6.

Using standard migraine questionnaires, researchers assessed patients both before and six months after bariatric surgery. They found headache frequency was significantly reduced from before surgery (11.1 headache days) to six months postoperatively (6.7 days), with nearly half of patients showing at least a 50 percent reduction in frequency. The odds of experiencing this level of improvement were higher in participants who experienced greater weight losses, regardless of the type of bariatric surgery.

The study also revealed substantial reductions in headache pain severity and related disability. Before surgery, half of all participants reported moderate to severe disability related to their migraines, often requiring medical treatment and intervention. However, six months after surgery, only 12.5 percent of participants reported this degree of disability.

"It's interesting to note that headache improvements occurred postoperatively even though 70 percent of participants were still considered obese six months after surgery," said Bond. "These findings suggest weight loss can help alleviate migraines even though an individual's obesity has not been fully resolved."

Bond says future studies are needed to determine whether smaller,

behavioral weight loss interventions also produce similar improvements in migraines.

In the United States, more than half of all adults are considered overweight or obese, and the numbers continue to rise. According to the Centers for Disease Control and Prevention, approximately 39 percent of Rhode Islanders are considered overweight and another 22 percent are considered obese. Obesity is closely linked with a number of serious health complications, such as heart disease, high blood pressure and diabetes. Bariatric surgery, when performed correctly, can help obese patients manage these conditions.

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