Clinical score may help predict likelihood of bariatric surgery curing type 2 diabetes in patients

April 20 2016

In a study published online by *JAMA Surgery*, Annemarie G. Hirsch, Ph.D., M.P.H., of the Geisinger Health System, Danville, Pa., and colleagues examined whether the DiaRem score, a validated score generated from data readily available could be used to predict patients for whom bariatric surgery will result in cure of type 2 diabetes. This score can be used to predict whether bariatric surgery will lead to short-term remission of diabetes.

The DiaRem score ranges from 0-22 points and is based on age, insulin dependence, diabetes medication use, and hemoglobin A1c level. The researchers reviewed electronic health records up to 8 years after Roux-en-y gastric bypass (RYGB) surgery for 407 patients with type 2 diabetes. The sample was a subset of patients from the original validation study of DiaRem who had at least 5 years of electronic health record data postoperatively. Complete remission was defined as return to normal glycemic measures and no treatment for 1 year. Patients were classified as cured if complete remission lasted at least 5 years.

Of the 407 patients, 35 percent experienced 1 or more years of complete remission and another 24 percent had partial remission lasting at least 1 year. Cure of diabetes was found in 20 percent of patients, and another 25 percent had prolonged partial remission. For remissions of any duration, the proportion of patients achieving remission decreased as DiaRem scores increased. Among the 100 patients with a score from 0

to 2, 82 percent experienced prolonged partial remission compared with none of the 33 patients with a score of 18 or higher. Fifty of the 100 patients with a score of 0 to 2 were cured of diabetes compared with none of the 33 patients with a score of 18 or higher.

"We now show that the DiaRem score predicts who will be cured by surgery, defined as complete remission lasting at least 5 years. The recent efforts to build larger cohorts, gather more data, and develop new analytical capabilities do not preclude continued exploration into how existing data assets can be used to improve the precision of care today," the authors write.

More information: *JAMA Surgery*. Published online April 20, 2016. DOI: 10.1001/jamasurg.2016.0251