Roux-en-Y gastric bypass surgery (RYGB). Is diabetes Mellityse tyoe 2 actually “cured”?

Mogens Fenger
University Hospital of Copenhagen, Denmark

Roux-en-Y gastric bypass surgery (RYGB) is widely applied to ameliorate morbid obesity, including diabetes in people with type 2 diabetes. The latter often vanish a few days after surgery for many, but not in all patients before any weight reduction has occurred. The explanation for this change in metabolic status is poorly understood, but the observation may suggest that the fates of obesity and diabetes are only partly linked metabolic conditions. The trajectories of weight reduction differ significantly between groups and any sub-populations of groups, the latter identified by the distance between individual trajectories using a k-means procedure. This suggests that different domains in the enormous genetic network governing basic metabolism are perturbed in obesity and diabetes, and in fact some of the patients are affected by two distinct diseases: obesity and diabetes mellitus type 2. Thus, the obesity part of the glycaemic derangement may have been ameliorated by RYGB (at least to some extent), but some defects of the diabetic state had not. It could actually be argued that the diabetics are not transformed into a non-diabetic state, as the true reference is the non-diabetics RYGB patients. Compared to this reference population, pivotal variables related to metabolism and diabetes remains significantly different.

Biography

Mogens Fenger MD is an expert in in population and medical genetics. Focus of his research is implementation of information theoretical aspects and network structures in his research of genetics of obesity and diabetes mellitus type 2. Dr. Fenger had established a biobank harboring more 1.000 RYGB patients. He collaborates with major institutions in Denmark and abroad.

mogens.fenger@regionh.dk