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Diabetic Surgery

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Diabetes Mellitus has been one of the most prevalent diseases in human beings from the very beginning.

Its prevalence is estimated at about 8% in different societies and with increasing body mass index of people all over the world the rate of type 2 diabetes is increasing (1).

It is estimated that about 90% of diabetic patients are of type 2 (2).

Weight loss, and the change in life style remains the cornerstone of its treatment.

Different oral and injectable drugs have been used to treat this debilitating disease, but so far even in the most developed countries like US the rate of uncontrolled diabetes mellitus is more than 20 % (3).

This rate is even higher in some countries.

Since 1955 the role of gastric surgery to improve diabetes was reported and in 1991 NIH consensus recommended bariatric surgery for diabetic patients with BMI to be more than 35 (4).

Resolution of hyperglycemia in morbid obese patients a few days after some bariatric surgeries -even before enough weight loss- showed there are other mechanisms that are responsible for such dramatic results.

Many investigations showed different hormonal roles in that effect.

Glucagon as one of the most important gut hormones which has a major role for insulin resistance is decreased promptly after gastric bypass surgery.

This finding resulted in the production of Foregut theory and at present the changing direction of food away from duodenum is essential in all diabetic surgeries.

In gastric bypass, biliopancreatic diversion, and biliopancreatic diversion–duodenal switch which have been postulated to be the most effective bariatric surgeries on resolution of diabetes mellitus type 2, this deviation of food direction is seen.

It seems that restrictive bariatric surgeries, like sleeve gastrectomy and gastric banding and vertical gastric plication have less effect on diabetes mellitus type 2 resolutions.

It may be because they mostly act by weight reduction mechanism, although hormonal effect of sleeve gastrectomy on ghrelin and reduction of gastric emptying time may have some hormonal effect.

Another major theory for resolution of diabetes mellitus type 2 after bariatric surgery is hindgut theory, which is mainly described by hormonal release from L cells by reaching undigested food to distal ileum.

These hormones are mainly GLP1, and Peptide YY.

These magical results -which resolved diabetes mellitus type 2 even in about 98% of patients- gave a new vision to scientists about bariatric surgery (5).

In this regard Metabolic and Diabetic surgery nomination was done.

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Authors' Contributions

Authors' contribution was 80% corresponded.

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