Diabetes without drug therapy after biliopancreatic diversion with duodenal switch: a reality for most on intermediate-term follow-up

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Background: The potent effect of BPD-DS in inducing diabetes remission based on drug utilization data and biochemical markers of diabetes control on intermediate-term follow-up (up to 5 years) is described.

Methods: A retrospective review of severely obese patients with type 2 diabetes mellitus (T2DM) who underwent BPD-DS between 2006 and 2009 was performed. Patients were included if they had baseline HbA_{1c} and/or fasting glucose levels plus complete information in their medical record relating to diabetes drug therapy and follow-up at five distinct time points: first evaluation, pre-op visit, surgical admission, discharge, and last follow-up visit. Continuous data is expressed as mean±sd.

Results: 299 T2DM patients (178 F: 121 M) were reviewed. 99 patients were on Insulin on admission. Age, weight, and BMI at time of surgery were 46.8±8.9 yrs, 142.8±28.7 Kg, and 51.6±8.3 Kg/m^2, respectively. Follow-up time was 33±14 months (Range: 3 to 63 months), with >67% having >2yr follow-up. Weight on last follow-up was 86.0±17.3 Kg. Elevated baseline fasting glucose and HbA_{1c} (despite medical therapy) normalized as early as 3 months postoperatively and remained so on last follow-up. In the Insulin treated group, 89% were off insulin on last follow-up, and oral hypoglycemic agent use dropped to 9% (82% at surgery). Just 3% of those on oral hypoglycemic agents only at the time of surgery remained on these agents.

Conclusion: BPD-DS induces durable diabetes remission in obese patients based on biochemical markers of diabetes control, with most patients being off drug therapy up to 5 years postoperatively.