

PROGNOSTIC VALUE OF BILIOPANCREATIC LIMB LENGTH FOR TYPE 2 DIABETES REMISSION AFTER MINI-GASTRIC BYPASS

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The length of the biliopancreatic (BP) limb is the leading technically modifiable determinant of the metabolic effect of mini-gastric bypass (MGB). The optimal limb length for patients with type 2 diabetes mellitus (T2DM) has not been determined, and direct prospective comparisons of clinically used lengths are few.

Objective. To evaluate the effect of BP limb length on T2DM remission at 12 months and establish its independent predictive role.

Materials and methods. A prospective study included 164 patients with T2DM who underwent MGB: Group 1 - 180 cm limb (n=75); Group 2 - 200 cm limb (n=89). The primary endpoint was T2DM remission (HbA1c <6.5% without glucose-lowering therapy, ADA/EASD 2021); secondary endpoints were %EWL, HbA1c, and HOMA-IR. Independent predictors were identified using multivariate logistic regression (OR, 95% CI). Data was processed using SPSS 22.0; differences were considered significant at $p < 0.05$.

Results. The groups were comparable at baseline ($p > 0.05$). After 12 months, the 200 cm group demonstrated a higher %EWL (71.2 vs 65.4%; $p = 0.031$), lower HbA1c (5.7 vs 6.1%; $p = 0.028$) and HOMA-IR (2.0 vs 2.4; $p = 0.022$), as well as a higher T2D remission rate (73.0 vs 64.0%; $p = 0.041$). According to the multivariate analysis, a loop length of 200 cm was an independent predictor of remission (OR 2.5; 95% CI 1.3–4.8; $p = 0.006$), along with %EWL >70% (OR 3.1) and an early decrease in HbA1c of >2.5% by month 3 (OR 2.6).

Conclusions. Lengthening the BP limb to 200 cm independently increases the likelihood of T2D remission and is the most significant technically modifiable factor for the metabolic success of MGB. It is advisable to titrate the limb length towards 200 cm in patients with severe, poorly controlled T2D as part of a personalized approach.