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DOES WEIGHT LOSS THROUGH MEANS OF BARIATRIC SURGERY REDUCE THE RISK OF TYPE 2 DIABETES IN OBESE QATARI PATIENT A RETROSPECTIVE ANALYSIS

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Background: The use of bariatric surgeries such as Gastric Bypass and Sleeve Gastrectomy in managing obesity and associated diseases such as type 2 diabetes mellitus (T2DM) has been induced in clinical practice. Weight reduction through means of bariatric surgery has metabolic benefits and may improve the management of T2DM. **Objectives:** The aim of this study was to investigate if weight loss through bariatric surgery can reduce the risk of T2DM in patients without the onset of T2DM. **Study design:** A retrospective analysis was conducted on post-bariatric patients at the department of bariatric and metabolic surgery at Hamad General Hospital. **Methods:** Two hundred and two eligible pre-diabetic Qatari patients who have undergone bariatric surgery in 2016 and satisfied the inclusion and exclusion criteria of the study were analyzed. Data on Glucose, Insulin and C-peptides levels at baseline and follow-up were extracted in order to compare the change of these variables at baseline, 6 and 10 months follow up before and after 10 months from the date of surgery. **Results:** Seventy one males with mean age of 32.73 ± 10.37 and one hundred and thirty one females with mean age of 33.90 ± 9.88 were included in the analysis. Change in weight was strongly and positively associated with change in insulin level (0.701, 95% CI: 0.027, 1.347, $p=0.042$) also, as weight changes fasting glucose changes (1.993, 95% CI: 0.359, 3.627, $p=0.017$). Follow-up period greater than 6 months was not found to be significantly associated with weight loss (2.049, 95% CI: -2.249, 6.349, $p=0.313$). **Conclusion:** Our study confirms results from international studies that weight


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loss through bariatric surgery can reduce the risk of developing Type 2 Diabetes Qatari obese patients. The results of the study suggest that post-surgery periods can be detrimental to the fate of fasting glucose and insulin levels and therefore compliance maybe of great importance to ensure success and sustainability of weight loss and diabetes prevention. Larger samples size and longer follow-up period is required to confirm these findings.