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LIRAGLUTIDE 3.0 MG FOR WEIGHT LOSS, IS IT MORE EFFECTIVE IN DIABETIC OR NON-DIABETIC PATIENTS? A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Liraglutide is an analogue of Glucagon-Like Peptide-1 (GLP-1) which was approved for treatment of type 2 diabetes mellitus at doses of 1.2 and 1.8 after that was approved at dose of 3.0 mg for treatment of obesity in combination with diet and exercise. Efficacy of liraglutide for weight loss was studied for diabetic and non-diabetic patients as well. The objective of this review is to determine if liraglutide is more effective in diabetic versus non diabetic patients.

Methods: We conducted a systematic review and meta-analysis of randomized clinical trials (RCT) comparing efficacy of liraglutide 3.0 mg for weight loss among diabetic and non-diabetic patients. We searched PubMed, Ovid Medline, Google Scholar and Cochrane Library databases relevant published studies in English from Mar' 2008 until Mar' 2018. We estimated standard mean difference (Std. MD) with 95% confidence intervals using random effects model and assessed for heterogeneity (I²).

Results: We screened a total of 42 studies related to liraglutide efficacy for weight loss from which four studies (with 4678 patients) studies met our inclusion criteria. One of them studied liraglutide efficacy in weight loss in diabetic patients, while the other three studied liraglutide efficacy in weight loss in non-diabetic patients. Weight loss in non-diabetic patients was statistically higher (Std. MD 0.80, CI 0.74 to 0.86, [P=0.49|I²=0%])

Discussion: This meta-analysis of RCTs showed that weight loss due to liraglutide use in non-diabetic patients was statistically higher than it in diabetic patients.

Other: More trials on diabetic patients using liraglutide for weight loss are required. Also more trials on variant ethnicities are required.

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