The role of fasting C-peptide in predicting diabetes remission after sleeve gastrectomy: systematic review and meta-analysis

Tsao, CS1.

Review question / Objective: Whether preoperative fasting plasma C-peptide level can be used as a predictor of diabetes remission after sleeve gastrectomy?


Information sources: Medline, Pubmed, Web of science.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 April 2022 and was last updated on 20 April 2022 (registration number INPLASY202240127).

INTRODUCTION

Review question / Objective: Whether preoperative fasting plasma C-peptide level can be used as a predictor of diabetes remission after sleeve gastrectomy?
METHODS

Participant or population: Had a simple sleeve stomach surgery, he has type 2 diabetes.

Intervention: Sleeve Gastrectomy.

Comparator: C-peptide > 3ng/L.

Study designs to be included: randomized controlled trials, observational cohort/case-control studies.


Information sources: Medline, Pubmed, Web of science.

Main outcome(s): There was a difference in remission rate of diabetes between patients with high fasting C-peptide and those with low fasting C-peptide after sleeve gastric surgery.

Quality assessment / Risk of bias analysis: Cochrane was used for RCTS and Newcastle-Ottawa Scale for assessing the quality of studies were used for others.

Strategy of data synthesis: Minimum study number: 20 patients, preoperatively divided into two groups with a 3ng/ml fasting plasma c-peptide boundary odds ratios for individual studies will be combined using a random effects meta-analysis.

Subgroup analysis: Subgroup analysis: age, sex, article type (prospective/retrospective), single-center, multi-center, years of diabetes, insulin use, etc.

Sensitivity analysis: Select different statistical models or perform subgroup analysis

Country(ies) involved: China.

Keywords: Sleeve Gastrectomy, Fasting plasma C-peptide, type 2 diabetes remission.

Contributions of each author: Author 1 - Tsao Chunsheng.