



RESULTS

Participants were 59.5% female, aged 47.1 ± 11.7 years, with a fasting glucose of 104.6 ± 10.4 mg/dL. Baseline insulin AUC was $13,005.8 \pm 6,895.2$ μ U/mL for GS200 and $13,233.8 \pm 8,268.9$ μ U/mL for placebo. At week 25, insulin AUC was reduced by $17.0 \pm 8.2\%$ in GS200 and increased by $5.0 \pm 8.0\%$ in placebo arms (mean difference: $-22.0 \pm 10.5\%$, $P=0.04$). Participants on GS200 had a greater reduction in postprandial insulin at T60 (-35.0 ± 13.1 vs. -1.5 ± 12.8 μ U/mL for placebo, $P=0.05$) and T120 (-30.9 ± 11.6 vs. 0.5 ± 11.4 μ U/mL for placebo, $P=0.04$), and a greater reduction in insulin Cmax vs. placebo (mean difference: -47.3 ± 21.1 μ U/mL, $P=0.03$). No significant differences were observed for postprandial glucose or HOMA-IR between arms.

CONCLUSION

Administration of GS200 in people with prediabetes significantly improved postprandial insulin secretion independent of weight loss.

PP-OL-11

RECURRENT HYPOGLYCAEMIA IN A PATIENT WITH TOTAL GASTRECTOMY

<https://doi.org/10.15605/jafes.037.AFES.104>

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CASE

A 56-year-old male hostel resident with a past history of spastic diplegic cerebral palsy was repeatedly admitted for hypoglycaemia since January 2021. Past medical history revealed that on August 2018 he had a 5 cm bleeding acute gastroduodenal ulcer which required total gastrectomy and duodenostomy. He had several admissions for severe symptomatic hypoglycaemia in 2021 (January, February, May, June, July). He denied history of over-the-counter medication or alcohol intake. He experienced hypoglycaemia after meals. Prolonged 75 g oral glucose tolerance test showed hypoglycaemia at 3 hours with a glucose level of 1.7 mmol/l and paired insulin of 4.3 mIU/l. Thyroid function test and 1 μ g short synacthen test results were normal. Urine toxicology was normal. He was referred to a dietitian on September 2021 and was given a trial of 2 tablespoons uncooked cornstarch (UCS) with water. He did not have any hospital admissions for hypoglycaemia since then. The home sugar monitoring showed capillary glucose mostly at 4-5 mmol/l, occasionally down to 2.9 mmol/l but not requiring admission.

The patient suffered from late dumping syndrome which is also seen in post-bariatric surgery patients. After sleeve gastrectomy or bypass surgery, as the undigested food has rapid transit to the small intestine, it stimulates release of gut hormones including glucagon-like-peptide 1 which causes hypoglycaemia. Dietary modification includes small frequent meals and increasing dietary fibre intake. The UCS has a low glycaemic index. It slows down the absorption of glucose and rise in blood glucose. If the patient fails dietary measure, acarbose, diazoxide and somatostatin analogue are the next steps. If the patient fails medical treatment, he may need surgical re-intervention such as pyloric reconstruction.

PP-OL-12

BEMPEDOIC ACID (ETC-1002) AS A NEW ALTERNATIVE TO STATIN THERAPY: AN UPDATED META-ANALYSIS AND SYSTEMATIC REVIEW WITH GRADE APPROACH

<https://doi.org/10.15605/jafes.037.AFES.105>

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OBJECTIVES

Bempedoic acid inhibits ATP-citrate lyase (ACL) two steps upstream of HMG-CoA reductase and may be recommended for patients who have not achieved LDL-C targets despite maximally tolerated or high-intensity statin therapy. Until now, there is no meta-analysis performed and this study intends to answer this question and to provide additional trials.

METHODOLOGY

Studies were searched using keywords: Bempedoic Acid or ETC-1002 and lipid in several databases of the Cochrane Central Register of Controlled Trials (CENTRAL), PubMed, ScienceDirect, and OVID. All references were reviewed using the Centre for Evidence-Based Medicine critical appraisal checklist. The descriptions of the extracted data are guided by the Preferred Reporting Items for Systematic Reviews (PRISMA) statement with GRADE approach. 4385 papers were initially collected, and twelve studies were pooled and entered review synthesis.



RESULTS

Ten RCTs were identified with a total of 3754 patients, 2468 intervention and 1284 control, and followed up for 4 to 52 weeks. The combined data showed that the primary endpoint, percent changes in LDL-C MD -25.81 [95 CI% -29.56, -22.06], was statically significant. Secondary endpoints were to assess the percent change from baseline for non-HDL-C -20.19 [95 CI% -23.42, -16.95] and apolipoprotein B -15.43 [95 CI% -17.09, -13.76] with a p value of <0.00. Two studies revealed that when adding it to dual therapy, 90% of patients achieved LDL-C <70 mg/dL, and 95% of patients had \geq 50% lower LDL-C from baseline to week 6; One study showed that adding PCSK9i lowered LDL-C by 30.3% vs placebo ($P<.001$).

CONCLUSION

Bempeidic acid significantly decreased LDL-C, non-HDL-C, and apolipoprotein B levels.

PP-OL-13

CORRELATION OF TG/HDL-C RATIO AND TyG INDEX WITH C-REACTIVE PROTEIN IN IMPAIRED FASTING GLUCOSE SUBJECTS

<https://doi.org/10.15605/jafes.037.AFES.106>

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OBJECTIVES

Prediabetes is an insulin resistant (IR) condition. The TG/HDL-C ratio and TyG index were associated with prediabetes and IR which are related to cardiovascular disease (CVD). HS-CRP is a marker of inflammation that is closely related to CVD. The aim of this study is to determine the correlation between TG/HDL-C ratio and TyG index with HS-CRP as a marker of chronic inflammation in impaired fasting glucose (IFG).

METHODOLOGY

Research subjects were taken from Makassar Lipid and Diabetes Study, an observational study which involved 92 prediabetic subjects aged 18-70 years old in Makassar City, Indonesia between January to April 2022. Triglyceride, HDL-C, FPG, and HS-CRP were examined. Level of HS-CRP >3-10 mg/L defined as a high risk of CVD. Impaired Fasting Glucose defined as fasting plasma glucose 100-125 mg/dL. Statistical analyses used were Kruskal-Wallis and Chi-Square tests.

RESULTS

The mean TG/HDL-C ratio was 4.88, TyG index was 4.92, and HS-CRP level was 4.53 ± 2.91 mg/L. The Chi Square test showed that there was no significant difference between TG/HDL-C ratio and TyG Index with high risk group of CVD (HS-CRP >3-10 mg/dL) among IFG subjects with $p=0.383$ and $p=0.584$, respectively.

CONCLUSION

Our results indicate that there is no statistically significant relationship between TG/HDL-C ratio and TyG index with HS-CRP in prediabetic IFG subjects.

PP-OL-14

OBESITY IN THE ASEAN REGION: INDONESIA'S PERSPECTIVE

<https://doi.org/10.15605/jafes.037.AFES.107>

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BACKGROUND

Obesity is a chronic, relapsing, multifactorial, treatable neurobehavioral disease in which an increase in fat mass causes adipose tissue dysfunction and physical fat mass abnormalities cause metabolic, biochemical, and psychosocial health problems. After smoking and armed violence, war, and terrorism, obesity is the third leading cause of social burden.

Indonesia, one of the countries with a large population of more than 270 million people, is the world's fourth most populous country. According to the Ministry of Health of the Republic of Indonesia's Basic Health Research, the prevalence of obesity in adults increased from 19.1 percent in 2007 to 26.3 percent in 2013 and 35.4 percent in 2018. Obesity is more prevalent in females than in males, at 44.4 percent and 26.6 percent, respectively. As a result, one in every three adults is obese. Overweight and obesity were prevalent in children at a rate of 20%, or one in every five children. According to the World Obesity Atlas (2022), Indonesia has 14 million females (14%) and 8 million males (8%) who are obese (BMI >30 kg/m²)

The situation is a health burden as well as a financial burden for individuals and the state. The potential impact of rising obesity rates is an increase in the prevalence of prediabetes (IGT) and diabetes in Indonesia, which were 10.2 percent and 5.7 percent in 2007, 29.9 percent and 6.9 percent in 2013, and 30.8 percent and 10.9 percent in 2018. According to the 2019 IDF Atlas, Indonesia has the world's third largest adult population with prediabetes, with 29.1 million people and