



PP-OL-09

THE ASSOCIATION BETWEEN BETEL QUID CHEWING AND METABOLIC SYNDROME AMONG URBAN ADULTS IN THE MANDALAY DISTRICT OF MYANMAR

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INTRODUCTION

As the prevalence of the metabolic syndrome, obesity and diabetes increases worldwide, the need to identify modifiable lifestyle risk factors increases, especially those that may be relatively unique to a specific population.

To explore a possible association between betel quid chewing and metabolic syndrome (MS).

METHODOLOGY

This was a community-based cross-sectional study done in Dhamma Hall, a Buddhist temple. Participants were 391 adults residing in the Chan Aye Thar Zan Township in the Mandalay District of Myanmar. We interviewed the subjects and measured their triglycerides, HDL-Cholesterol (HDL), glucose, waist circumference, body mass index and blood pressure. The main outcome measures were betel quid chewing status and the presence of MS. Other risk factors for MS (age, sedentary lifestyle, family history of DM, hypertension, and cardiovascular disease, and risk factors for non-communicable disease such as sex, smoking, alcohol use), were adjusted through multivariate regression analysis.

RESULTS

The prevalence of MS was similar in chewers (n=182) and non-chewers, at about 50%. After controlling for other factors, the predictors for development of metabolic syndrome among betel chewers was the daily number of quids (Adjusted OR 1.47, CI 1.10- 3.30), age 40 years and older (AOR 2.23, CI 1.28 – 3.92), family history of hypertension (AOR 0.38, CI 0.21- 0.68), and family history of diabetes (AOR 0.10, CI 0.03- 0.32).

CONCLUSION

Betel quid chewing may represent a behavioral lifestyle target for approaches to reduce the incidence of metabolic syndrome.

PP-OL-10

EFFECTS OF GELESIS200, AN ORAL SUPERABSORBENT HYDROGEL, ON POSTPRANDIAL INSULIN RESPONSE IN PEOPLE WITH PREDIABETES: AN ANALYSIS OF THE LIGHT-UP STUDY

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OBJECTIVE

Postprandial hyperinsulinemia is associated with beta-cell dysfunction and development of type 2 diabetes. This analysis assessed the effect of Gelesis200 (GS200), an investigational oral superabsorbent hydrogel, on postprandial glucose and insulin response among people with prediabetes, in the LIGHT-UP study.

METHODOLOGY

The LIGHT-UP study investigated the safety and efficacy of GS200 vs. placebo over 25 weeks in 254 participants with prediabetes or type 2 diabetes and a body mass index of 27-40 kg/m². The analysis included participants with prediabetes who completed a 2-hr oral glucose tolerance test at baseline and at Week 25 (42 participants per arm). Plasma glucose and serum insulin were measured at 15–30-minute intervals. Area under the curve (AUC) was calculated using the trapezoidal method and differences were assessed using ANCOVA model with weight loss as a covariate.



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

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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

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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.