

GLP-1RA in Hospital Sultanah Nur Zahirah Terengganu, a tertiary centre in East Coast Malaysia. Clinical outcomes assessed were weight, BMI, total daily dose of insulin (TDD), HbA1c reduction and adverse events after six months of treatment initiation.

## RESULTS

A total of 12 patients were eligible for this study, with a median age of 48 years (24.3). The majority were Malays (91.7%), with 1 Indian. There were equal numbers of males and females. Ten patients had diabetes, with four diagnosed for more than ten years. Nine (75%) were on insulin treatment prior to GLP1-RA initiation, with a median baseline TDD of 66 IU/day (74.0). Two patients were started on GLP1RA for obesity. Eight patients were on injectables, and the remaining were on oral GLP1RA. At baseline, the median weight, BMI and HbA1c were 123.3 kg (49), 48 kg/m<sup>2</sup> (18.9), and 8.5% (3.8), respectively. After six months, there were significant reductions in median weight and BMI, 111 kg (47.3) and 41.3 kg/m<sup>2</sup> (16.2) (P-value = 0.012, 0.018, respectively). A median weight reduction of 5% from baseline was observed. There was a reduction in median HbA1c to 7.7% (4.0), however, this was not statistically significant (P-value = 0.34). No change in TDD was observed (P-value = 0.85). Three patients (25%) experienced mild gastrointestinal symptoms, which did not require discontinuation of GLP1RA.

## CONCLUSION

GLP1-RA is effective for weight loss even with a shorter treatment duration, while the effect on HbA1c and TDD reduction may require a longer treatment duration.

## EP\_A061

### DECIPHERING THE PUZZLE: GLP-1 AGONIST-INDUCED ACUTE KIDNEY INJURY UNRELATED TO MEDICATION SIDE EFFECT

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## INTRODUCTION/BACKGROUND

GLP-1 agonists are crucial treatments for type 2 diabetes and obesity due to their positive impact on glucose control and weight. However, concerns have arisen about their potential to cause pre-renal acute kidney injury (AKI), typically attributed to gastrointestinal side effects. This case presents a notable anomaly: AKI occurring without

gastrointestinal symptoms, prompting further investigation into the mechanisms behind GLP-1 agonist-associated AKI.

## CASE

A 35-year-old Malay male was seen with morbid obesity class II, young-onset hypertension and stable chronic kidney disease stage 3. He was started on semaglutide at 0.25 mg weekly, with plans to up titrate to 0.5 mg weekly. Upon initiation, renal function showed a concerning decline in eGFR from 54 to 35 mL/min/1.73 m<sup>2</sup>. Despite ruling out gastrointestinal side effects or dehydration and obstructive uropathy through ultrasound, semaglutide was temporarily withheld. After a month without the medication, his eGFR improved to 53 mL/min/1.73 m<sup>2</sup>. We then cautiously initiated Liraglutide at 0.6 mg OD which resulted in a weight reduction from 98 kg to 94 kg within a month. However, renal function deteriorated further, with eGFR dropping to 34 mL/min/1.73 m<sup>2</sup> and creatinine levels rising to 204 mmol/L. Understanding the importance of preserving renal function, we subsequently discontinued GLP-1 agonist therapy.

## CONCLUSION

Despite the absence of gastrointestinal side effects, GLP-1 receptor agonists can still be associated with acute kidney injury. Hence, it is important to monitor renal profile regularly, especially when starting treatment with these medications.

## EP\_A062

### INTERTWINING FATE OF PROLACTIN AND METABOLISM: THE OVERLOOKED CAUSAL EFFECT RELATIONSHIP

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## INTRODUCTION/BACKGROUND

Hyperprolactinaemia has always been regarded as an excess of hormones resulting in metabolic abnormalities. However, recent studies have shown that prolactin has a protective value against metabolic disorders in obese individuals.<sup>1</sup> Increased circulating prolactin inhibits adipocyte hypertrophy, downregulates expression of inflammatory cytokines in visceral adipose tissue and alleviates insulin resistance.<sup>1</sup> However, chronically high prolactin influences orexigenic-anorexigenic hormones, resulting in hyperphagia, weight gain and obesity.<sup>2</sup> We present a patient with Metabolically-Healthy-Obesity [MHO] with hyperprolactinemia.

**CASE**

A 33-year-old male, presented with hypogonadism and infertility. His symptoms of hypogonadism preceded an increase in weight of 40 kg within two years. Blood pressure was 112/78 mmHg. He had sparse facial and axillary hair with Tanner stage 2. His latest weight was 164 kg (BMI 52 kg/m<sup>2</sup>). He had no acanthosis nigricans. His serum prolactin was 5985 m IU/L. He had low fasting morning serum testosterone [1.11 nmol/L]. FSH and LH levels were both low [0.3 IU/L]. His metabolic parameters were all normal: HDL 1.1, LDL 2.7, Triglyceride 1.1 (mmol/L), HbA1c 5.3%, Fasting Blood Sugar 4.7 mmol/L. MRI showed pituitary microadenoma. Other anterior pituitary hormonal assays were normal. He was started on Cabergoline 0.5 mg once a week.

**CONCLUSION**

The relationship between hyperprolactinemia and obesity is complex. In our patient, the sudden weight gain coincided with symptoms of hypogonadism due to hyperprolactinaemia. Thus, hyperprolactinaemia may have contributed to his weight gain. He also has normal metabolic parameters despite being obese class 3, which could indicate the protective value of elevated prolactin levels. In treating obese patients with hyperprolactinemia, a prolactin level that is too high or too low is proven to be unfavourable.<sup>3</sup> Thus, treatment with cabergoline has been shown to help in reducing weight in this group of patients while keeping the serum prolactin at a slightly higher level to avoid diminishing the protective value of prolactin in obese patients.<sup>3,4,5</sup>

**EP\_A063****A CASE OF KETOGENIC DIET-INDUCED ELEVATED CHOLESTEROL**

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**INTRODUCTION/BACKGROUND**

Weight management through exercise and dietary intervention has been shown to reduce cardiovascular risk. Here, we report a case of significant weight loss achieved through exercise and a ketogenic diet, resulting in a deranged lipid profile.

**CASE**

A 39-year-old female with underlying class 3 obesity and type 2 diabetes mellitus on metformin 500 mg BD was first seen in March 2022. Her weight was 153 kg and her BMI was 58.2 kg/m<sup>2</sup>. Since then, she has diligently followed a strict ketogenic diet and exercised daily. She ate one meal a day,

and her diet primarily consisted of meat, eggs, nuts, cheese and fresh cream. Over the past 18 months, she successfully lost 85 kg, and her BMI decreased to 25.6 kg/m<sup>2</sup>. Notably, her body composition improved, and her diabetes went into remission. However, her lipid profile exhibited marked derangement.

Physical examination revealed no significant abnormalities, and it was noteworthy that both her parents had a history of dyslipidaemia. In response to the deranged lipid profile, the patient was advised to discontinue her current dietary plan. Instead, a more balanced diet emphasizing lower fat content, higher fibre intake and appropriate carbohydrate levels was recommended. Additionally, she was initiated on atorvastatin in October 2023 to address the lipid abnormalities. Regular monitoring and follow-up appointments were scheduled to track her progress.

**CONCLUSION**

While intermittent fasting and the ketogenic diet can undoubtedly lead to desired weight loss, patients should be counselled and carefully monitored by their physicians. This case illustrates that much is still unknown about the impact of these diets.

**EP\_A064****BODY COMPOSITION CHANGES 12 MONTHS POST-METABOLIC SURGERY IN MALAYSIAN ADULTS WITH OBESITY: THE DIFFERENCES IN DIABETIC STATUS**

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**INTRODUCTION**

Body composition analysis following metabolic surgery is vital for clinical evaluation and monitoring treatment outcomes. In Malaysia, however, the evidence for these changes is limited. We aimed to explore the changes in body composition in patients with obesity after 12 months of metabolic surgery, according to their diabetes status.