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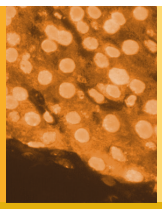
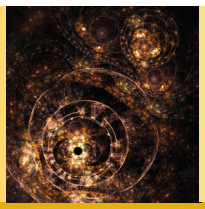
OBESITY UPDATE

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Friday 19 January 2024

Cavendish Conference Centre, London

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Obesity Update 2024 is endorsed by:

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Obesity Update 2024

Oral Communications

OC1

Tier 3 Obesity Services in England - ongoing failure to meet need

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Provision of Tier 3 (T3) services as defined in NHS commissioning guidelines are integral to NICE obesity guidelines. Previous surveys have shown that people with obesity face a postcode lottery in accessing them. With the establishment of Integrated Care Boards (ICBs) now responsible for commissioning T3 services, we undertook a survey using Freedom of Information requests to all English ICBs in October 2023 asking for: a comprehensive outline of the T3 obesity care pathways; the names of providers involved in delivering T3 services during the April 1, 2022, and March 31, 2023; the total number of referrals made; and the number of patients who commenced Tier 3 obesity treatment during the same period of time. We received responses from 40 out of 42 ICBs, 85% of whom stated they had T3 services. Non-NHS treatments only were provided by 7%, and a blended service (combining NHS and non-NHS weight management) was provided by 17% of ICBs. Scrutiny of the services offered, in many cases suggested they did not fulfil the criteria for a T3 service (no multidisciplinary team, short duration intervention, no access to pharmacotherapy, gateway service for bariatric surgery). Over half of England's ICBs services comprised both face-to-face and online appointments. Only 55% of ICBs could provide data on the number of referrals to their services (total April1 2022 to March31 2023 = 43,860); 20 of 40 ICBs had data on the number of PwOs starting treatment (total 13,912). Despite NICE guidelines, health technology assessments and clinical need, these data confirm an ongoing lack of obesity treatment services for PwO in England. They are similar to findings from Coulman et al, who used routinely collected primary care data in England from the Clinical Practice Research Datalink linked with Hospital Episode Statistics from 2007-2020 (56,783 of eligible patients referred to weight management)[1], and the recent GIRFT (Getting it Right First Time) Programme National Service Report findings (only around 44% of trusts in England have obesity services at T3 or above)[2].

1. Coulman et al. PLoS Med 20(9): e1004282. 2. Wass & Lansdown. Endocrinology GIRFT Programme National Specialty Report Feb 2021.

DOI: tp10.1530/obabs.4.OC1

OC2

Associations between weight loss pre-hip or pre-knee arthroplasty and peri- and post-operative outcomes

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Obesity is an important modifiable risk factor for developing osteoarthritis. Arthroplasty improves mobility and quality of life in those with osteoarthritis. BMI thresholds are mandated by some commissioning bodies in the UK, leading to extended waiting times for arthroplasty. Obesity is associated with increased complications after arthroplasty. It is unknown if these risks can be mitigated by weight loss pre-operatively. Our systematic review and meta-analysis explores the association between weight loss pre-arthroplasty and peri- and post-operative outcomes.

Methods

Our review was registered with PROSPERO. We searched keywords on Pubmed, EMBASE, Ovid, Web of Science, Google Scholar, Europe PMC and throughout grey literature. Studies included those who underwent either medical and/or surgical weight loss prior to arthroplasty. Exclusion criteria included: articles pre-2010, case studies, those assessing outcomes in upper limb arthroplasty, revision surgery and articles not published in English. Outcome measures included incidence of superficial wound infection, deep wound infection, pulmonary embolus, deep vein thrombosis (DVT) and revision surgery up to 90 days post-arthroplasty. The intervention group included patients living with obesity who lost weight pre-arthroplasty. The control group were patients of any BMI who underwent arthroplasty without intervention.

Results

21 articles were included, with data available for 50,672 patients in the intervention group and 1,446,755 patients in the control group. Pre-arthroplasty weight loss was associated with an increased risk of revision surgery (Odds Ratio (OR) 1.32, 95% CI [1.13,1.53], $P = 0.0004$) and DVT (OR 1.37, 95% CI [1.23 to 1.52], P0.00001). However, there was no association between pre-arthroplasty weight loss and superficial wound infection (OR 1.08, 95% CI [0.84 to 1.40], P0.54), deep wound infection (OR 0.97, 95% CI [0.77 to 1.22], P0.79) or pulmonary embolism (OR 0.93, 95% CI [0.78 to 1.10], P0.38).

Conclusion

These data suggest that weight loss prior to arthroplasty does not reduce the risk of perioperative complications and may increase the risk of DVT and revision surgery. However, well-designed and adequately powered prospective studies are required to establish the risks and benefits of pre-arthroplasty weight loss in people living with obesity. Further research into the causative link between obesity and operative complications is also required.

DOI: 10.1530/obabs.4.OC2

OC3

Comparing non-invasive biomarkers of non-alcoholic steatohepatitis in obesity

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Background

Approximately 15-25% of the world population has non-alcoholic fatty liver disease (NAFLD) and nearly quarter go on to develop non-alcoholic steatohepatitis (NASH). Obesity and T2DM are strong risk factors with prevalence of NAFLD rising to 90% in obesity and 60% in T2DM. Liver biopsy remains the gold standard in diagnosis and prognosis; nevertheless, it is expensive and invasive. The underlying fibrosis stage is key in determining clinical outcomes hence, a reliable non-invasive biomarker, which identifies early stages of fibrosis, could improve clinical management.

Aim

To compare two biomarkers; perilipin-2 (PLIN2) and Ras-related protein-14 (RAB14), with cytokeration-18 (CY18) in NASH and liver fibrosis diagnosis and resolution.

Methods

BRAVES (NCT03524365) study included fifty patients with histologically proven NASH who underwent RYGB. All had an ultrasound-guided needle liver biopsy at 1-year follow-up to assess improvement/resolution of NASH and/or fibrosis. PLIN2 and RAB14 (using flow cytometry) and CY18 (using Simple Plex, Ella and M65 ELISA, PREVIA) were analysed on pre and post-surgery samples. A uni-variable logistic model followed by a multi-variable logistic model with a step-wise elimination procedure was assessed to investigate the role of covariates (such as presence/absence of T2DM, triglycerides, gender) in predicting NASH resolution without worsening of fibrosis and fibrosis improvement without worsening of NASH post-surgery. For both NASH and fibrosis, improvement was defined as NAFLD Activity Score (NAS)/Steatosis Activity Fibrosis (SAF-F) values at 1-year follow-up smaller than pre-surgery values.

Results

Patients were aged 49 ± 9 (mean $\pm$ SD) years, 56% were male and 54% had T2DM. 15 had NAS = 3; 21, NAS = 4; and 14, NAS $\geq$ 5. F1, F2 and F3 were reported in 23, 23 and 4 respectively. After RYGB, resolution of NASH without worsening of fibrosis occurred in 37 patients. From step-wise selection procedure it emerged that only PLIN2 was a significant predictor of NASH resolution (P0.0016). PLIN2 was also able to predict NASH severity. RAB14 predicted severity of fibrosis changes for SAF-F $>$ 1 (P0.008) with 84% accuracy.

Conclusion

PLIN2 and RAB14 are reliable non-invasive biomarkers in diagnosing the presence and severity of NASH/liver fibrosis in obesity as well as resolution of NASH after metabolic surgery.

DOI: 10.1530/obabs.4.OC3

Presented Posters

P1

Predictors of weight loss in a Secondary Care Tier 3 Specialist Weight Management Service Following Modifications due to the COVID-19 Pandemic

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Background
A four-tiered system is currently in place for weight management in the National Health Service (NHS). Tier 3 comprises specialist weight management services and aims for a clinically meaningful weight loss of ≥5%, as the National Institute for Health and Care Excellence (NICE) recommends. Within the Imperial Weight Centre (IWC), patients receive support from a multi-disciplinary team and education sessions are delivered in a group setting. Following the COVID-19 pandemic, most sessions have been delivered online, whereas previously they were in person. Thus, predictors of ≥5% weight loss with the current methods of providing weight management support were assessed in this study.
Methods
Various characteristics were collected for patients who completed the IWC Tier 3 programme between March 2019 and October 2022. Fisher's exact tests were used to identify predictors of ≥5% weight loss and statistically significant variables were used in a multivariate logistic regression model.
Results
In total, 404 patients (79% female, 56.6% White, median age 41.5 (interquartile range (IQR) 17.8) years, median baseline body weight 123.7kg (IQR 29.0)) completed Tier 3, and 23.3% achieved ≥5% weight loss. Among the cohort, sixty-seven patients (17%) were receiving GLP-1 analogue medication. Type 2 diabetes mellitus (OR 1.64 (CI 0.91 to 2.90), *P*0.092) and glucocorticoid use (OR 0.53 (CI 0.19 to 3.99), *P*0.018) were associated with ≥5% weight loss on univariate analysis but not on multivariate analysis. By contrast, hypertension (OR 1.96 (95% CI 1.17 to 3.31), $P<0.05$) and GLP-1 analogue use (OR 2.14 (CI 1.13 to 3.99), $P<0.05$) were independently associated with ≥5% weight loss on multivariate analysis.
Discussion and Conclusions
Increased motivation to achieve greater weight loss may explain the independent association of hypertension with ≥5% weight loss. While GLP-1 analogues have demonstrated effective weight loss during use, its discontinuation is associated with weight regain. Moreover, current NICE criteria for eligibility for NHS-funded GLP-1 analogue treatment limit their use to a subset of patients with obesity, and there is currently a supply shortage of this medication to the United Kingdom. Therefore, in addition to these agents, other effective strategies are imperative to support long-term weight management.

DOI: 10.1530/obabs.4.P1

P2

Weight management in women with subfertility seeking assisted reproduction: a case series

Mariana Abdel-Malek, Chioma Izzi-Engbeaya, Jessica Upton, Lucy Tweedlie, Saira Hameed, Samantha Scholtz, Harvinder Chahal & Tricia Tan
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The impact of obesity on fertility and pregnancy is well-established. The literature remains conflicting around optimal BMI threshold and weight loss strategy on reproductive outcomes. We describe a series of twenty-six women with obesity that were planning a future pregnancy or seeking assisted fertility services. They were initially reviewed for weight management at Imperial College Healthcare between September 2020 and September 2022. Clinical case information was retrieved from documentation on electronic patient records up to November 2023. The median age was 31 years (range 25 to 41) and mean baseline weight 112.9kg (SD +/-21.7kg). Polycystic ovarian syndrome was the aetiology for subfertility reported in 76.9% ($n=20$) with pelvic or unknown cause in the remainder ($n=1$ and $n=5$, respectively). Other metabolic comorbidities noted included dyslipidaemia (38.5%,$n=10$), type 2 diabetes (23.1%,$n=6$), pre-diabetes (15.4%,$n=4$) and fatty liver disease (11.5%,$n=3$). By September 2022, half of the twenty-six patients ($n=13$) had been initiated on a GLP-1 analogue (semaglutide $n=10$; liraglutide $n=3$). At this point in time, for those receiving a GLP-1 analogue of various duration (3 to 24 months), the percentage change from baseline weight ranged from 2.88% to -20.2% (3.5kg to 21kg) with a mean loss of -9.38kg or -8.23% in body weight (SD +/-6.55kg and +/-5.92%, respectively). 42.3% reported use of orlistat and three patients had already undergone bariatric surgery prior to initial review. By November 2023, a further three patients had undergone a sleeve gastrectomy and three patients were awaiting planned weight loss surgery. Eight patients had proceeded to have a natural pregnancy or received access to assisted conception after meeting BMI eligibility. Our case series demonstrate the clinical need for special input around weight management for women with overweight or obesity seeking fertility support. A clearer treatment pathway will support existing NHS guidelines around BMI eligibility criteria to access assisted reproduction. Current limitations include the limited supply of GLP-1 pharmacotherapy, long waitlist for bariatric surgery and the need to avoid pregnancy for 12-18 months thereafter. There is a need to address obesity-related subfertility at an earlier age, which will also reduce the risk of pregnancy complications secondary to metabolic comorbidities.

DOI: 10.1530/obabs.4.P2

P3

Proposed prioritisation framework for the introduction of new medical therapies for weight management in the NHS

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Until recently, only two medications were licenced and approved by the National Institute of Health and Care Excellence (NICE) for weight loss, orlistat and liraglutide. Semaglutide 2.4mg was launched in September 2023. Both liraglutide and semaglutide belong to a class of drugs called GLP-1 analogues, also used in the treatment of Type 2 diabetes. Successful weight loss outcomes for GLP-1 analogues has led to increased global demand and shortages. In June 2023, a National Patient Safety Alert was published indicating that no new prescriptions should be initiated for either weight loss or type 2 diabetes. Currently, Wegovy® can only be prescribed within specialist weight management services, in accordance with NICE Technology Appraisal 875 (March 2023). Weight management centres have seen significantly increased referral rates, which have in turn led to longer waiting times for patients and increased workloads for already overstretched services. Unwarranted variation in access to these services and long waiting times, coupled with limited access to medication has resulted in concern expressed by healthcare professionals working within obesity services about how best to deliver care going forward and a request for guidance about how best to phase in medical therapies. With a growing need for national guidance on how to best manage the balance between resources, the clinical effectiveness of these treatments and public expectation, a group of UK endocrinologists and obesity physicians including the Royal College of Physicians (RCP) Obesity Fellows have developed a phasing approach. Given the broad eligibility, this proposed framework highlights patients who should be prioritised for access to these medications, such as those requiring rapid weight loss to facilitate time-sensitive treatment for otherwise life-limiting conditions, including but not limited to malignancy and organ transplant. This framework is aimed at healthcare professionals working within weight management services delivering medical therapies for people living with obesity; to offer some guidance until the supply of drugs can be delivered in an equitable and sustainable manner. It is intended that this framework will be revised according to emerging evidence. NHS organisations may wish to phase in availability of these medications in a tiered fashion as outlined.

DOI: 10.1530/obabs.4.P3

P4

Super Saturdays at Ashford and St Peters Hospital: service re-design of medical and surgical pathways to reduce waiting times

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Over the last few years, the number of referrals and demand for weight management services has significantly increased. This has in part been due to the introduction of novel medical therapies, recognition of co-morbidities associated with obesity during the Covid-19 pandemic and the rise in people living with obesity. This rise in demand has occurred at a time of financial austerity within the NHS and without the necessary investment in workforce required to address the demand. This has led to

increasing waiting times and at Ashford and St Peters Hospital, this led us to re-design our pathways and create patient-centred medical and surgical pathways. NICE guidance (CG189) was further updated in July 2023, which encouraged us to look at earlier referral to surgery and a more streamlined approach to identify medical problems early in the pathway. In addition, to address our backlog and waiting times of patients awaiting surgery, we created dedicated clinics, 'Super Saturdays', focusing on an MDT approach and seeing 100 patients each day. We present our medical and surgical pathways and ways in which this provided a more patient-centred approach, reduced waiting times and allowed us to proceed with surgery in a more timely manner. We discuss the challenges faced and opportunities that hopefully other organisations may find helpful if faced with similar issues.

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P5

Continuous glucose monitoring in the management of post-bariatric hypoglycaemia – does it have a place in treatment algorithms utilised by the NHS?

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Post-bariatric-surgery hypoglycaemia (PBH) typically presents at least six months post-operatively, particularly in those who have undergone Roux-en-Y gastric bypass (RYGB). PBH is characterised by high postprandial insulin and glucagon-like peptide-1 secretion, leading to hypoglycaemia 1-3 hours after consumption of meals that are high in carbohydrate content. We present the case of a 47-year-old female, who underwent RYGB in 2009, without prior history of diabetes. Seven years after RYGB, she first noticed hypoglycaemic events while monitoring during pregnancy, which were mostly asymptomatic. Over the last few years, she has increasingly been experiencing autonomic symptoms 1-2 hours after high-carbohydrate meals, with capillary glucose levels dropping as low as 2.5mmol/l and symptoms improving after carbohydrate intake (Whipple's triad). She did not report episodes of fasting hypoglycaemia, nor any other medical history other than vitiligo, and with alternative causes of hypoglycaemia excluded biochemically, a clinical diagnosis of PBH was made. She had a Freestyle Libre trial; during the fortnight she noted that with a strict low-carbohydrate diet, her glycaemic variability was reduced, and her symptoms and frequency of hypoglycaemia improved. She was not keen to take acarbose and has tried to manage PBH with dietary modification as per dietitian advice. She follows a low glycaemic-index carbohydrate intake diet (30 grams for meals, 15 grams for snacks) paired with vegetables, protein and healthy fats, taken every 3-4 hours, but she still experiences autonomic symptoms in daily life, affecting her quality of life. She reports that during the period using continuous-glucose-monitoring (CGM), she was more confident to modify her dietary choices to prevent post-prandial hypoglycaemia, and would be keen to continue using CGM, but the challenge remains that its use in PBH has not been approved by regulatory authorities in the UK. The literature demonstrates that CGM can help patients with PBH detect impending hypoglycaemia, allowing them to adopt dietary modification and early treatment to prevent and reduce post-prandial hypoglycaemia. Although currently not NHS-funded for PBH, CGM could be considered as a treatment option for PBH in clinical practice after dietetic intervention, and it may be particularly important for people experiencing disabling episodes of hypoglycaemia.

DOI: 10.1530/obabs.4.P5

P6

The Roczen programme: Real-world data of a digitally enabled time restrictive eating programme on biometric outcomes in an ethnically diverse population in the UK

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Introduction
Roczen is a digital, clinical programme designed for people living with obesity (PLwO) and complications such as type 2 diabetes (T2D) that utilises time-restricted eating (TRE). Weight management and metabolic health intervention data mostly includes people from white ethnicity. The aim was to examine the impact of the programme in an ethnically diverse population in the UK at 12 months (12m).
Method
We conducted a retrospective, real-world service evaluation. Patients were initiated on a 16-hour TRE plan with low-carbohydrate, moderate-protein dietary guidance. The programme was digitally delivered by clinicians with regular video follow up, goal setting, self monitoring, motivational interviewing, feedback, and peer support via an App. Advice on increasing physical activity from baseline was tailored to the individual. We calculated mean ± standard deviation to compare biometric outcomes in different ethnic groups.
Results
We included 945 patients (47.4 ± 10.3 years, 64.6% female, BMI: 34.6 ± 6.1kg/m2) who were at varying stages of the Roczen programme. 61.2% were from white ethnicity ($n = 578$), 16.0% from black ethnicity ($n = 151$), 14.1% from South Asian (SA) ethnicity ($n = 133$) and 8.8% were from other ethnic groups ($n = 83$). Of data available, mean weight loss was 8.6 ± 7.1kg (-8.7%) at 12m ($n = 132$). At 12m, mean weight reductions were 6.0 ± 6.3kg [-6.1%] in people from black ethnicity, 6.6 ± 5.2kg [-7.9%] in people from SA ethnicity and 10.5 ± 7.7kg [-9.9%] in people from white ethnicity. For available data on waist circumference, mean reduction was 10.1 ± 10.5cm (9.3%) at 12m ($n = 70$), with similar reductions between ethnic groups (white: -10.6 ± 10.5cm, black: -12.9 ± 11.2cm, SA:-7.9 ± 9.1cm). Retention rates at 12m were 46% in Black ethnicity, 28% in SA and 25% in WE groups.
Conclusions
Evaluation of the Roczen programme within a real-world setting shows that people from black and SA ethnicity appear to perform better than those from white ethnicity in terms of retention. Reductions in body weight in black and SA ethnicities are less than in white ethnic groups, but all weight reductions were clinically significant. Waist circumference loss was highest in people from black ethnicity. Overall, our data shows the suitability of the programme for PLwO from diverse ethnic backgrounds.

DOI: 10.1530/obabs.4.P6

P7

Using CGM to Differentiate Hypoglycaemia as a Cause of Seizures following Bariatric Surgery: A Case Report

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Background
Seizures post-bariatric surgery are rarely reported yet are clinically significant. Severe postprandial hypoglycaemia can present as seizures in a patient with a history of bariatric surgery. However, differentiating between primary seizure disorders and hypoglycaemia-causing seizures can be challenging.
History
A 57-year-old female presented to our bariatric clinic with frequent seizures, occurring approximately three times per week. She underwent Roux-en-Y gastric bypass surgery in 2020. Her weight was 114 kg pre-surgery and is currently 88 kg. There were no symptoms suggestive of dumping syndrome.
Results
Blood tests, including micronutrients, electrolytes, and ammonia levels, were normal. We investigated her with a blinded continuous glucose monitoring (Dexcom G6) for ten days, during which time the patient was asked to complete a food and seizure diary. Over the ten-day period, the CGM recorded relatively stable glucose levels, indicated by moderate glucose variability with a coefficient of variation (CV) of 16% and an average glucose reading of 8.1 mmol/L. Hypoglycaemia was not detected, and during the three seizure episodes, glucose levels remained normal, ranging from 7.4 to 10.2 mmol/L.
Conclusions
The normal glucose levels observed during seizure episodes do not support a direct link to post-bariatric hypoglycaemia.
Learning points
Post-bariatric hypoglycaemia is an important differential diagnosis in patients presenting with new-onset seizures following gastric bypass surgery. Although CGM is not routinely used in obesity clinics, its utility in this case has been extremely useful in helping to exclude hypoglycaemia as the cause of the seizures.

DOI: 10.1530/obabs.4.P7

P8

Exercise medicine consultations as part of a weight management service

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The National Institute for Health and Care Excellence recommend that weight management programmes should include behaviour change strategies to increase patient physical activity (PA) and decrease physical inactivity (PI). This is advocated as part of a multicomponent interventional approach, alongside dietary, pharmacological and surgical interventions. (NICE 2023). Combined dietary and PA interventions have demonstrated widespread health benefits over dietary interventions alone. These include physiological benefits such as favourable lipid profiles (Gobbo 2019, Clark 2015 & Schwingshackl 2014) and reduced insulin resistance (Battista 2021), in addition to physical benefits such as reduced overall body weight (Ramage 2014), waist circumference (O'Donoghue 2021) and visceral adiposity (Rao 2019), with increases in lean body mass (Chu 2021). Greater functional improvements are also seen in combined interventions compared to PA or dietary changes alone for overall cardiovascular fitness (Miller 2013) and quality of life (Batsis 2017). The Barts Health Weight Management Service (BHWMS) champions a multidisciplinary team (MDT) approach to patient care. Weekly clinics provide specialist assessment, investigation and management from a diabetes nurse, dietician, psychologist and doctors. Patient lists run simultaneously before a collaborative MDT meeting for complex case reviews. After considering training requirements and clinical governance, training programme director approval allowed incorporation of Sport and Exercise Medicine (SEM) Specialty Registrars within the MDT. Subsequently, an Exercise Medicine (EM) branch was introduced to BHWMS, with PA focused consultations. Using Moving Medicine for a framework, these consultations explore patient motivation and readiness to change, promoting increased PA and reduced PI through motivational interviewing (Moving Medicine 2022). Where appropriate, patient specific PA prescriptions are provided, applying frequency, intensity, type and time principles. Baseline patient PA levels are collected prior to initial consultations using the global physical activity questionnaire, which will be repeated at 12 weeks to gauge consultation efficacy. Whilst the EM branch of the BHWMS remains in its infancy, early qualitative patient feedback has been positive, indicating high levels of patient satisfaction and improvements in readiness to change. Further analysis and reflective practice will guide service development, but there is optimism for a new SEM legacy in the context of the BHWMS.

DOI: 10.1530/obabs.4.P8

P9

Liraglutide Use in the Management of Obesity: RCHT Experience

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Introduction
Liraglutide has been available on the NHS since October 2020. Trial data have shown its association with clinically significant weight loss. At the Royal Cornwall Hospital Trust (RCHT), liraglutide became available for prescription within the tier 3 weight management Multidisciplinary Team (MDT) in September 2021. This audit aims to evaluate the demographics, tolerability, weight loss effects, and HbA1c changes in persons with obesity (PWO) who were prescribed liraglutide.
Methods
Data from thirty-four (34) PWO who met the NICE criteria and were prescribed liraglutide between September 2021 and August 2022 were audited.
Results
The cohort consisted of twenty-three (23) females, with a mean age of 54 $\pm$ 13 years (range 20-79). The mean baseline weight was 141.7 kg $\pm$ 35.5 (range 92.4-229), and the mean duration of liraglutide use was 11 months at the time of the audit. Ten (29.4%) PWO had discontinued liraglutide, either due to poor clinical response (5/34) ($<$5% loss of baseline weight at the 3-month review) or side effects (5/34). Males were more likely to discontinue liraglutide due to side effects or poor clinical response (p-value $<$0.05). The most common side effects reported were gastrointestinal. Age did not significantly predict tolerability (p-value $>$0.05). At 6 months, 63% of the cohort achieved $>$5% loss of baseline body weight, and within this group, 37% had $>$10% loss of the initial body weight. At the time of the review, 50% of the PWO on liraglutide had experienced $>$10% loss of the initial body weight. Female PWO and ongoing liraglutide users experienced more significant weight loss (p-values 0.03 and 0.013, respectively). The average baseline HbA1c was 44.2 mmol/mol, decreasing to 41.5 mmol/mol at the 6-month review. At the 6-month mark, 54.3% of the cohort had transitioned to an HbA1c in the normoglycemic range. liraglutide use was associated with reduced HbA1c in PWO (p-value $<$0.05).
Conclusion
The use of liraglutide in PWO demonstrated clear clinical benefits in promoting weight loss and improving glycemia during the period of use. However, it remains unclear if these benefits will persist once the medication is discontinued following two years of use, based on current guidance.

DOI: 10.1530/obabs.4.P9

P10

The sight-saving role of Bariatric Surgery in Idiopathic Intracranial Hypertension

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Idiopathic intracranial hypertension (IIH) classically occurs in women with obesity and is characterised by raised intracranial pressure. Weight loss leads to reduction in intracranial pressure. We present a case of a 35-year-old female who was urgently referred to Imperial Weight Centre. She had recently undergone revision of a right ventriculoperitoneal shunt for longstanding IIH which had not resolved her high-pressure symptoms and continued to require therapeutic lumbar punctures (LPs) for worsening headache and vision loss. She had a BMI of 37.6kg/m^2 (107.3kg) with no history of childhood obesity or binge eating disorder. Over the last decade, her weight had gradually increased from a 70kg baseline following two pregnancies and concurrent deterioration in her mental health (post-natal psychosis, post-traumatic stress disorder). The long-term use of Quetiapine, and also Mirtazapine, were additional contributors to weight gain given the orexigenic effect with increasing her hunger. She was also on Levothyroxine for previous hypothyroidism. Previous attempts for weight loss intervention included a gastric balloon where she achieved 14kg loss, but it was removed due to pancreatitis and she regained weight thereafter. Her case was discussed at the Imperial Weight Centre MDT and bariatric surgery was recommended versus pharmacotherapy in view of previous pancreatitis. She underwent a laparoscopic sleeve gastrectomy shortly after multidisciplinary review (pre-operative weight 108kg) with no immediate post-operative complications. Three months later, she achieved 16.3% weight loss (92.1kg) and reported fewer headaches with less frequent therapeutic LPs required. She unfortunately required a laparoscopic cholecystectomy for pancreatitis secondary to gallstones after presenting with sudden, severe epigastric pain and amylase of 2,431unit/L. This case illustrates the significant impact of obesity on IIH and the important role of weight loss in clinical management. In this case, the weight loss intervention prevented vision loss, reduced hospital admissions for repeat LPs and neurosurgery. Quality of life and mental health also improved, and the patient can now look forward to resuming her daily activities. In addition to weight loss surgery, we now have pharmacotherapy options e.g. semaglutide, which patients suffering with IIH will significantly benefit from and their accessibility should be implemented as part of the treatment pathway.

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Post-bariatric surgery hypoglycaemia: Challenging cases in the Medical Obesity Clinic

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Introduction
Post-bariatric surgery hypoglycaemia (BPH) is a metabolic complication of bariatric surgery, which may develop months or years post-procedure and is encountered increasingly frequently in obesity medicine. We present a case series from our large Tier 4 service, illustrating the challenges posed when diagnosing and managing this condition.
Case 1
51F with a history of obesity (BMI 55, weight 159kg) and Roux-en-Y gastric bypass (2010), attended for review weighing 72kg (BMI 24.9), troubled by hypoglycaemia (1.9-2.3 mmol/L using flash monitoring). After unsuccessful trials of dietary modification, acarbose and semaglutide (Ozempic®) 0.5mg, symptoms improved on dulaglutide (Trulicity®) 1.5mg.
Case 2
58F was re-referred by her GP following Roux-en-Y gastric bypass (2014), having lost over 30kg (contemporary BMI 32.3), reporting a postprandial lab glucose of 2.2 mmol/L. A food diary revealed suboptimal protein intake requiring dietetic support. She was unable to tolerate acarbose 50mg TDS due to bloating.

Case 3
29F underwent a Roux-en-Y gastric bypass in Turkey (2021), attended for review 6 months post-partum reporting ongoing fatigue, weakness, weight loss. Despite troublesome hypoglycaemia during pregnancy, she delivered a healthy, normal weight baby in May 2023. She cannot tolerate acarbose; enhanced nutritional support is ongoing.
Case 4
26F had a Roux-en-Y gastric bypass (2018), lost 83kg from baseline 152.4kg (contemporary BMI 26.0) and was referred by the dietician with recurrent hypoglycaemia, prompting 5 A&E attendances. A symptom diary led to dietary modification, and a mixed meal test (MMT) will be considered after Freestyle Libre monitoring.
Case 5
51F with background of throat cancer and Roux-en-Y gastric bypass (2015), developed hypoglycaemia symptoms in 2018 (weight stable at 65kg). MMT confirmed severe hypoglycaemia with blood glucose 1.2 mmol/L at 90mins. Lifestyle interventions provided little benefit and acarbose was associated with flatulence; canagliflozin 100mg OD is being trialled.
Discussion
Diagnosis of PBH can be difficult; symptom severity varies and timely access to capillary blood glucose measurement is often lacking. A multidisciplinary approach is crucial, given limited efficacy/tolerability of alpha-glucosidase inhibitors and somatostatin analogues. Further evidence regarding the roles of gut hormone agonists and SGLT2 inhibitors in managing PBH is needed.

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Challenges in the management of a case of severe and complex obesity

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This is a case of 47 year old lady with severe and complex obesity BMI 80 kg/m2.
Medical background
Type 2 diabetes, obstructive sleep apnoea on CPAP, depression and osteoarthritis and acute pancreatitis likely due to gallstones in 2020. Her medication list included pioglitazone 45 mg, gliclazide 160 mg, liraglutide (Victoza) 1.8 mg, metformin 1000 mg twice daily, citalopram and ramipril. Her latest HbA1c in September 2023 was 10.1% (87 mmol/mol). She has had 4 children and the last being C-section delivery 12 years ago. Due to the severe obesity, she was referred several times over the past few years to weight management services and has not engaged with this. She has also been referred several times for assessment for bariatric/metabolic surgery since 2017 and has never shown up for the clinic appointments. On her last telephone diabetes clinic appointment, her husband (who is also her carer) answered on her behalf stating difficulties faced with management of her obesity-related complications and with appearing for clinic appointments due to difficulties with transport and mobility. He seemed keen to make a change to improve her overall health and expressed he would attempt to bring her for face to face appointments in future. At the last appointment she was advised to stop gliclazide and pioglitazone and was commenced on an SGLT-2 inhibitor with once daily basal insulin. Another referral was made to the bariatric surgery service and to the tier 3 weight management service. Difficulties faced include: 1. History of pancreatitis and on liraglutide (GLP1-agonist) - however this has not helped with weight loss. 2. International shortage of GLP-1 receptor analogues that does not currently allow alternative GLP-1 treatment options. 3. Would semaglutide 2.4mg once weekly would be an option for this person with previous episodes of gallstone related pancreatitis? 4. Has not been engaging with previous referrals for weight management and bariatric surgery assessments. How could we further support and manage this young lady with the limitations faced?

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