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BRAIN AND SPINE 1 (2021) 100307 100754
HOW MUCH WEIGHT LOSS IS REQUIRED TO REDUCE INTRACRANIAL PRESSURE IN IDIOPATHIC INTRACRANIAL HYPERTENSION?

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Background: The amount of weight loss required in idiopathic intracranial hypertension to reduce intracranial pressure (ICP) has not been established.
Methods: Using the IIH:weight trial data from 66 active patients randomised to bariatric surgery or community weight management intervention (CWI) (1:1). The expected ICP values are predicted by a linear hierarchical regression model fit to the trial outcomes, adjusted for time, treatment arm and weight.
Results: Modelling the trial outcomes demonstrated that greater reduction in ICP was predicted with greater weight loss, with 24% weight loss resulting in normalisation of ICP in this population. The effect on ICP further improves between 12 to 24 months as the participants continue to lose weight. For expected ICP values to cross the threshold for normal, at 25cmCSF within 2 years, it is generally required that the patient would be allocated to the bariatric surgery arm and achieve a weight of 110kg. Those with a higher starting weight needed to lose more weight to meaningfully reduce ICP. This model also demonstrated that in the CWI arm if no or little weight loss was achieved in those with a high baseline weight an increase in ICP would be expected.
Conclusions: There should be care when exposing women with IIH and BMI≥35kg/m2 to repeated cycles of lifestyle interventions that fail to achieve adequate weight loss, as this approach is unlikely to achieve sustained remission of disease.

BRAIN AND SPINE 1 (2021) 100307 100755
BARIATRIC SURGERY VERSUS COMMUNITY WEIGHT MANAGEMENT INTERVENTION FOR THE TREATMENT OF IDIOPATHIC INTRACRANIAL HYPERTENSION (IIH:WT): A RANDOMIZED CONTROLLED TRIAL

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Objective: The IIH weight trial (IIH:WT) aimed to compare the efficacy of bariatric surgery with a community weight management intervention (CWI) in active IIH.
Methods: This was a five-year randomized control trial which enrolled participants between March 1, 2014 and May 25, 2017 at five NHS hospitals in the United Kingdom. Participants with active IIH and body mass index (BMI) ≥35kg/m^2 were screened. The primary outcome was change in intracranial pressure (ICP) measured by lumbar puncture (LP) opening pressure (OP) at 12 months.
Results: Sixty-six women were randomised (mean age, 32 years). ICP was significantly lower in the bariatric surgery arm at 12 months (adjusted mean difference -6.00cm cerebrospinal fluid [CSF] 95% confidence interval [CI] -9.5 to -2.4]; p= .001) and at 24 months (adjusted mean difference -8.2cmCSF [95% CI, -12.2 to -4.2]; p< .001) compared with the CWI arm. Weight was significantly lower in the bariatric surgery arm at 12 months (adjusted mean difference -21.4Kg 95% CI, -32.1 to -10.7]; p< .001) and at 24 months (adjusted mean difference -26.6kg [95% CI, -37.5 to -15.7]; p< .001) compared with the CWI arm. Quality of life (SF36, physical component score) improved significantly at 12 and 24 months (adjusted mean difference p=.043; p=.006, respectively).
Conclusions and relevance: In this study of women with active IIH and a BMI ≥35kg/m^2, bariatric surgery was superior to a CWI in lowering ICP. Continued improvement at two years demonstrated the impact on sustained disease remission.

BRAIN AND SPINE 1 (2021) 100307 100756
NEGATIVE IMPACT OF COVID-19 LOCKDOWN ON PAPILLOEDEMA AND IDIOPATHIC INTRACRANIAL HYPERTENSION

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Background: Enforced national lockdown due to COVID-19 limited access to medical services. We evaluated the impact on those presenting with papilloedema, and those with a pre-existing diagnosis of idiopathic intracranial hypertension.
Methods: A single United Kingdom centre prospective cohort study between May 15, 2020 (start of emergency clinics after first 8 week national lockdown) and July 31, 2020. Demographics, diagnosis and outcomes were documented.
Results: The study recorded 130 individual patients, 123 with a diagnosis of idiopathic intracranial hypertension. 92% were female and mean age was 32.5 years. Emergency cerebrospinal fluid diversion surgery was required in 13% (17/130), a 4.7-fold (367%) increase compared to the same period in 2019. Weight increased in 58% (mean 6.2kg SD 4.6) and corresponded to a significant increase in papilloedema (Optical Coherence Tomography retinal nerve fibre layer 15μm SD 57.3, p=0.014). Elevated anxiety levels (hospital anxiety and depression scale >7) occurred in 64%.
Conclusions: There was a 367% increase in emergency shunting to save vision in idiopathic intracranial hypertension following national lockdown. Worsening of papilloedema, weight gain, and detrimental effects on mental health were recorded. Countermeasures should be implemented to minimise harm in this rare disease during future service restrictions and lockdowns.