

T2:PS:59

Getting the balance right – a pragmatic community intervention programme for overweight/obese children in Gateshead.

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Aims: In Gateshead, a quarter of 10-11 year olds are overweight or obese. *Getting the Balance Right* is a holistic intervention aimed at tackling this problem in school aged children, specifically, aiming to improve Body Mass Index (BMI) in children completing the pathway of care for a twelve month period.

Methods: After inter-disciplinary consultation, between health, social services and leisure services locally, a pathway of care was developed to identify and assess children who were overweight or obese. Personalised programmes of nutritional and behavioural advice and physical activity were offered to children and families. School health advisors or dietitians did initial assessments; paediatricians reviewed children thought to have underlying medical conditions and all children received coaching by a trained leisure worker. All data are quoted as means. BMI adult equivalent (Adeq) and BMI standard deviation scores (SDS) are given.

Results: Over 30 months, 231 children with a BMI Adeq of 28.9±5.8 and BMI SDS of 3.0±0.7 entered the programme. One hundred and seventy-five (11.4±3.3 years, 59% female and 78% obese) attended four dietetic appointment over 6.6±3.1 months and BMI Adeq decreased by 0.9±1.7 and BMI SDS by 0.14±0.25 (both p<0.0001). A significant decrease in BMI was maintained and 20 children, who still had not been discharged from dietetic review, attended their ninth appointment at 14.9±3.6 months, when BMI Adeq had decreased by 1.8±3.1 and BMI SDS by 0.27±0.44 (p<0.01).

Conclusion: Our pragmatic intervention was a partnership between the PCT, Hospital Foundation Trust and the council. It has uniquely produced a sustained and significant improvement in BMI in a large cohort. The results compare favourably with other shorter, smaller-scale interventions and other community projects^{1,2}. Our approach could be used in other areas as a strategy to combat the rise in childhood obesity.

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- 2) Rudolf M, Christie D, McElhone S, Sahota P, Dixey R, Walker J, Wellings C *Arch Dis Child* 2006 91,736-739.

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Obesity and chronic kidney disease incidence in adult women: Tehran Lipid and Glucose Study

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Background: Epidemiological data comparing different aspects of obesity in predicting CKD in a cohort are limited.

Objective: We examined the association between BMI and CKD incidence and compared it with other anthropometrical measurements to define best predictor of CKD in women.

Methods: In this population-based cohort study, a representative sample of 2498 women, older than 18 years of age, free of CKD at baseline, were followed for 3.5 years. We estimated GFR by using the abbreviated equation from the Modification of Diet in Renal Disease Study and defined CKD as GFR less than 60 mL/min/1.73m². Multivariate logistic regression was used to examine the relation between the baseline anthropometrical measures and CKD incidence.

Results: Mean BMI of our participants at baseline was 27±5kg/m². After 3.5 years CKD developed in 148 (5.3%) of participants. Higher baseline BMI was associated consistently with increased incidence of CKD. The incidence of CKD in, normal BMI (≤25), overweight (25.1 to 30) and obese (≥31.1 kg/m²), were 3.2, 8.1, and 10.8% respectively. The crude ORs for having CKD across normal, overweight and obese women categories were 1.00 (reference), 2.67 (1.71-4.17) and 3.66 (2.34-5.78), respectively, (p for trend<0.01). After adjustment for age, smoking, baseline blood pressure, baseline diabetes, change in BMI, waist and WHR, the odds ratios for CKD incidence were 1.00 (reference), 1.68 (0.95-2.96) and 1.75 (0.86-3.57), respectively; (P for trend<0.05). Waist and WHR were excluded from the model. Similar results were noted after exclusion of participants with baseline diabetes mellitus.

Conclusion: BMI, but not waist and WHR, is an independent, strong, and potentially modifiable risk factor for CKD in women. Weight loss might represent a novel intervention to reduce risk of CKD development and progression.

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Which pre-operative factors predict adequate weight loss following laparoscopic gastric band insertion?

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Introduction: Laparoscopic gastric band insertion (LGBI) is being performed more frequently, but not all patients achieve adequate weight loss. This study aimed to analyse whether weight at initial assessment, age, gender, pre-operative weight loss or device type predicted total post-operative weight loss.

Methods: A retrospective analysis was performed on data on LGBI patients attending a regional bariatric centre over 3 years. Patients were operated on if BMI>35kg/m² with an associated co-morbidity, or BMI>40kg/m² without. All received professional dietary advice pre-operatively, and pre-operative calorie restriction of 900kcal for 2 weeks prior to surgery. Devices used included the Lap-BandTM, Swedish adjustable band, or HeliogastTM device.

Results: There were 246 consecutive patients analysed: 197 female (80%), median age 42y (IQR 36-49); 49 male, median age 49y (IQR 45-55). Mean waiting time between initial assessment and LGBI insertion was 7.8 months. Median post-operative follow-up was 16 months. Initial assessment weight significantly correlated with pre-LGBI weight loss (p<0.0001, Spearman). Patients with BMI ≥50kg/m² (n=75) lost 6.4±1.0kg before the LGBI, compared to a weight loss of 2.1±0.5kg pre-LGBI in patients with a lower BMI (n=109). Pre-LGBI weight loss correlated with post-LGBI weight loss (p=0.016, Spearman). Post-operative weight loss was not correlated with age, gender or device used.

Conclusions: Patients with high assessment BMI, and those with greatest weight losses pre-LGBI appear to achieve greater post-LGBI weight loss. It appears that pre-operative diet predicts post-LGBI compliance and thus weight loss.

T2:PS:62

A randomized controlled trial on the effect of dietary advice on gestational weight gain in obese pregnant women: preliminary results

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Maternal obesity is a major risk factor for obstetric complications including gestational diabetes, hypertensive complications and operative delivery. Excessive gestational weight gain (GWG) further increases these risks. The optimal follow-up to reduce GWG in these patients is not known. We therefore randomised obese pregnant women (age: 29 ± 4 years; BMI: 33.5 ± 4.01 g/m²) in 2 intervention groups: one group receiving nutritional advice through a purpose-designed brochure (A) and one group additionally receiving active lifestyle education (B). The hypothesis is that nutritional advice through a brochure or active education results in reduced GWG. Nutritional habits were evaluated every trimester by means of three 7-day food records and compared with a control group (C).

Preliminary results in obtained in 99 obese pregnant women demonstrate that dietary habits at the start of the study did not reach recommended values, but were comparable between the groups. After the intervention, total energy intake was lower in groups A and B than in the controls (p=0.033). This effect was mainly due to a decreased fat intake in the 2 intervention groups versus control group (p=0.008). There were no significant differences in mean (SD) GWG between the three groups (11±7 vs 10±6 vs 10±7 kg). Birth weight of the babies was comparable. These preliminary results show that nutritional advice improves dietary habits of obese women (reduced energy and fat intake), but had no significant effect on GWG or birth weight.