Weight Change and Risk of Hyperglycemia in Elderly Women - DTU Orbit (31/12/2018)

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Background

Hyperglycaemia increases the risk of type 2 diabetes, heart disease and stroke, and is influenced by weight. However, the impact of preceding weight change on blood glycemia levels in late-life is less well understood.

Aim

We studied the interplay between weight change and risk of hyperglycaemia in a prospective cohort of elderly women.

Methods

Elderly Caucasian women (age: 67.1 years at baseline, n = 1173) enrolled in the Prospective Epidemiological Risk Factor study with baseline and 13-year follow-up measurements of BMI and fasting glucose levels (FPG) and no previous history of diabetes or impaired fasting glucose. Multivariate logistic regression was used to determine risk of hyperglycaemia (FPG ≥ 5.6 mmol/L or HbA1c ≥ 42 mmol/mol) in normalweight (BMI ≤ 25 kg/m²), overweight (BMI = 25–29.9 kg/m²) and obese (BMI ≥ 30 kg/m²) women who either lost weight, were weight-stable or had gained weight at follow-up.

Results

Overweight and obese elderly women who had gained weight at follow-up presented an increased risk of hyperglycaemia, OR = 2.7 (1.6–4.6) and OR = 3.2 (1.5–6.8), compared to weight-stable normalweight women. Overweight and obese women who lost weight decreased their risk of hyperglycaemia to a level comparable to weight-stable normalweight women. Overweight and obese women with stable weight presented a two-fold increased risk of hyperglycaemia compared to normalweight weight-stable women.

Conclusions

Losing weight in late life had a positive effect on the risk of hyperglycaemia in overweight and obese women, while further, weight gain increased the risk of hyperglycaemia. The study highlights that strategies to reduce weight in obese and overweight elderly women could have a positive influence on disease burden in late-life.

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