



The Effect of Pregnancy on the Body Mass Index in Southern Chinese Women in the Reproductive Age

Terence TH Lao

Department of Obstetrics & Gynaecology, The University of Hong Kong
Queen Mary Hospital

Obesity is an important problem worldwide. Women tend to gain weight following pregnancy. There is data suggesting that pregnancy has a significant effect on the development of obesity in women up to and beyond the age of menopause, with the weight increment and increased risk of obesity being proportional to the number of pregnancies. However, whether this effect of pregnancy on the development of obesity is dependent or influenced by age is unclear. Since obesity is also related to age, the effect of pregnancy may be different in different age groups. As many women are delaying pregnancy until a much later age, and the mean age of women delivering in Hong Kong is continuously increasing, an understanding on the interaction between pregnancy, age and obesity would help to design preventive programmes. There is no local data on this particular issue, and a prospective study to randomise women to have different numbers of pregnancies at different age groups is obviously out of the question. In order to obtain some local data, we utilised the obstetric database of the Department of Obstetrics and Gynaecology, the University of Hong Kong, and analysed the total singleton deliveries from 1998 to 2001 to determine the relationship between obstetric history with the maternal body mass index (BMI) at the first antenatal visit for different decades of life. The subjects were categorised by the WHO classification of obesity into 4 groups as follows: (A) Underweight (BMI ≤ 18.5 kg/m²), (B) Normal (BMI 18.5 – 24.9 kg/m²), (C) Overweight (BMI 25.0 – 29.9 kg/m²) and (D) Obese (BMI ≥ 30 kg/m²). The prevalence of overweight and obese subjects in the second, third, fourth, and fifth decades of life were 14.3% and 2.9%, 18.5% and 4.6%, 22.9% and 5.3%, and 28.9% and 7.1% respectively ($p < 0.001$). When correlated with parity status (para 0, para 1, para ≥ 2), significant correlation was found with subjects in the second, third, and fourth decades of life ($p < 0.01$), but not for the fifth decade ($p = 0.271$). These results indicate that at least for fertile women in Hong Kong, the number of previous pregnancies were correlated with the prevalence of obesity at the time of presentation of their latest pregnancy for age up to 39 years. From 40 years onwards, the effect of previous pregnancies disappeared probably due to a greater effect of aging on the development of obesity. Weight control through dieting and exercise and modification of life style after delivery would help to reduce the prevalence of obesity in local women.