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RELATIONSHIP BETWEEN OBESITY AND MENSTRUAL DISTURBANCES AMONG WOMEN OF REPRODUCTIVE AGE

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Objectives To evaluate the association between obesity and menstrual cycle characteristics among women of reproductive age.

Methods 236 women aged 18~41 years who were not taking hormonal contraceptives were included in the study. These women were recruited from the department of infertility and sexual medicine at the Third Affiliated Hospital of Sun Yat-Sen University between February 2011 and February 2012. Menstrual cycle characteristics were self-reported and usual cycles defined as regular cycles (between 22 and 35 days and not varying in length by more than 2–3 days each months). The other Cycles were defined as irregular. The following were evaluated: body weight, height, body mass index, waist circumference, hip circumference, waist-hip ratio (WHR), menstrual cycle, blood pressure, fasting glycaemia, total testosterone (T), insulin and the Homeostasis Model Assessment (HOMA test).

Results The rate of menstrual disturbances was higher in obesity group (8/25, 32% BMI ≥ 24 kg/m²) than that in non-obese group (26/211, 12.32%). Women with high central adiposity defined by WHR ≥ 0.8 were more likely to have a long cycle compared with their reference groups. HOMA test values (3.68 ± 1.42 vs 2.63 ± 1.02 , $p < 0.05$) in obesity group were significantly higher than those in control group.

Conclusions Obesity were associated with having an irregular menstrual cycle, especially abdominal obese made it more significant. IR in obese women can cause menstrual disturbances, suggesting that IR plays an important role in the mechanisms involved in the menstrual cycle control.