肥胖程度及曾否懷孕或更年期對台灣婦女腹臀部量測值的影響

The Effects of Fatness and Fertility on Abdominal Anthropometries of Taiwan Women

中文摘要

腰圍(WC)、腹部矢狀面直徑(SAD)等腹部量測已陸續被當作估算腹部脂肪量或預測代謝性心血管疾患風險的指標。不過，台灣地區正常體重、過重、或肥胖婦女，的各種腹臀部量測的平均值是多少？曾否懷孕或更年期等生育狀況，是否影響腹臀部外觀形態？歷來的研究很少做詳盡的分類比較。

本研究爲解答這些問題，自 2001~2003 蒐集本(天祿)肥胖門診求診並有完整資料的婦女病例，做 Cross-Sectional Study：根據衛生署肥胖定義予以分組爲體重正常(18.5≦BMI<24)組、過重組(24≦BMI<27)、肥胖組(BMI≧27)等三種體位組；然後就相同體位組中，再依生育史分組爲未曾懷孕組、曾經懷孕組、更年期組等三小組；分析比較各組包括腹部上中下三處之腹圍長、長短軸長，臀圍，以及 BMI、體脂肪率之腹部量測參數。

研究結果發現，肥胖婦女腹臀部各項參數，居三組中最大，體重過重婦女次之，體重正常婦女又次之。換言之，BMI 越高(肥胖度越高)，各項參數值越大，肥胖程度是影響婦女腰臀部外形的重要因素。比較相同體位的未曾懷孕，曾經懷孕或更年期婦女之各項腰臀部型態參數，可以發現曾經懷孕或更年期婦女的各項腰臀部形態參數值較大，其中以未曾懷孕婦女與更年期婦女之間的差異最爲顯著。換言之，生育狀況確實是影響婦女腰臀部型態的因素。

此外，無論是在肥胖程度對婦女腰臀部的影響，或在生育狀況對婦女腰臀部的影響，以腹部短軸變異的幅度最大，是量測婦女腰臀部最敏感的參數。上中下腹部的短軸／長軸之比，是表示該處橫切面趨近圓形程度的指數；上中下腹圍的短軸長軸之積則是表示該處橫切面積大小的指數，此二組參數可描述婦女腹臀部的型態。

英文摘要

Abdominal anthropometric indexes such as waist circumference (WC) and sagittal abdominal diameter (SAD) have been adopted in previous investigations for calculating abdominal fatness or predicting the risk of metabolic cardiovascular diseases. Nevertheless, what are the abdominal anthropometric values of normal-weighted, over-weighted, and obese women? Does pregnancy or menopause affect the shape of waist and hip? The aim of this study was to provide a comparison on these issues, which were unaddressed in previous studies.

The data were collected from female clinic patients with a complete medical history in weight loss treatment. These women are classified in groups according to the

Department of Health: normal-weighted (18.5≦BMI<24),over-weighted (24≦BMI<27), and obese (BMI≧27). Each group was further classified into three subgroups: never-pregnant, ever-pregnant, and menopausal. These parameters are measured in each group: circumference, waist, long and short abdominal diameter in the upper, middle, and lower abdominal sites, hip circumference, and BMI versus body fat percentage.

This research showed that on the averages on all abdominal anthropometric parameters, obese women have the highest measurement, followed by women who are over-weighted and normal-weighted. In other words, women with higher BMI (more obese) have higher measurements. Therefore, level of obesity is an important factor in affecting their shapes of waist and hip. Among women who are never-pregnant, ever-pregnant, or menopausal in the same weight distribution, we discover that there's a large difference in abdominal anthropometric parameters between women who are menopausal and ever-pregnant, and the difference is the most significant between women who are menopausal and never-pregnant. Therefore, the experience of pregnancy is indeed a factor affecting the shape of waist and hip.

In addition, whether it's the obesity or the experience of pregnancy that affects the shape of waist or hip of these women, the largest difference is measured at the short abdominal diameter. In the upper, middle, or lower waist, the ratio of short versus long abdominal diameter indicates the proximity to a circle on that cross section and the product of short versus long abdominal diameter indicates the area of that cross section. Both parameters describe the shape of women's waist and hip.