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## Assessing new terminal body and facial hair growth in pregnancy: Towards developing a simplified visually scoring system for hirsutism

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This study is to investigate the distribution and progression of terminal hair growth in pregnant women and determine whether a simplified scoring system for assessing hirsutism was possible. We recruited 115 pregnant women (discovery cohort) from before pregnancy to 24th gestation weeks and 1159 PCOS women (validation cohort) in out-patient department in an academic hospital and collected their clinical data including the assessment of facial and body terminal hair growth by modified Ferriman and Gallwey score system (mFG score) and the measurement of total testosterone (TT) level by liquid chromatographic tandem mass spectrometry (LC-MS/MS), through a prospective follow-up observational study. It showed that the TT level and mFG score increased as pregnancy progressed. Both the prospective study and receiver operating characteristics curve (ROC) indicated that the most contributive areas to hirsutism (defined as an mFG score  $\geq 5$ ) with new terminal hair growth were upper lip, lower back, lower abdomen and thigh. From which, a simplified mFG scoring system (sFG) was developed and a cut-off value of 3 was determined as 'hirsutism'. The pregnant 'hirsute' women could be distinguished from 'non-hirsute' with an accuracy of 95.2%, sensitivity of 96.8% and specificity of 94.3% for detecting hirsutism. This was further validated in PCOS population with a sensitivity, specificity and PPV of 97.6%, 96.4% and 96.4%, respectively. This study suggests that upper lip, lower back, lower abdomen and thigh may be an effective simplified combination of the mFG system for the evaluation of excess hair growth in Chinese women.

### Biography

Xiaomiao Zhao, MD, PhD, is an Associate Professor and Associate Chief Physician of Reproductive Endocrine, Advisor of PhD candidate and the Vice President of Youth Committee of the Chinese OB/GT Committee of International Health Care Exchange and Promotive Society. She has completed her MD and PhD from Sun Yat-Sen University in Guangzhou, China and Post-doctoral studies from Cedars-Sinai Medical Center, University of California in Los Angeles, USA. She has published more than 45 papers, among which, over 19 papers in reputed English journals (e.g. *Fertility and Sterility*, *Clinical Endocrinology*, *International of Cancer*, *International Journal of Cardiology*, etc.); and is serving as Reviewer of *International Journal of Cancer*, *JCEM* and *Endocrinology*. She takes charge of 11 research grants of China.

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