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The Anti-acne mechanisms of new Uen-Ching-Yiin formulation

○高于涵¹, 王静瓊² (¹Graduate Institute Of Pharmacognosy, Taipei Medical University, Taiwan, ²College Of Pharmacy, Taipei Medical University, Taiwan)

Aim: Acne vulgaris is a common skin disease in puberty. The pathogenesis of acne vulgaris is multifactorial, including: excessive secretion of sebum, abnormal follicular hyperkeratinization, bacteria proliferation and inflammation. Uen-Ching-Yiin(UCY) is composed of Huang-Lian-Jie-Du-Tang(HLJDT) and Si-Wu-Tang(SWT), thus it could clear heat and promote blood circulation. Doctors of Chinese medicine used UCY for eczema, psoriasis and acne. The anti-acne mechanisms of UCY were explored in this study.

Methods: UCY, HLJDT and SWT were extracted by 50% ethanol. In order to realize the anti-acne mechanism of these extracts, they were measured by the anti-*Propionibacterium acnes*(*P. acnes*) effect, inhibition of *P. acnes*-induced inflammation, the promotion of aromatase activity, and anti-proliferative effect of keratinocyte.

Results: UCY and HLJDT both inhibited *P. acnes* growth and *P. acnes*-induced inflammation, but SWT couldn't. In aromatase assay, UCY could more stimulate aromatase activity and converse testosterone to estradiol than SWT, but HLJDT couldn't. In according to the above results, UCY showed strong anti- *P. acnes* effect, inhibition of *P. acnes*-induced inflammation and promotion of aromatase activity.

Conclusion: This study indicated the optimal ratio of HLJDT and SWT to create a new composition of UCY. In the future, the new formulation of UCY is potential to develop as a topical anti-acne gel.