

ABSTRACT

Background :

Acne is a skin-problem that dermatologists have to-treat. The mechanism of isoflavone in androgen-metabolism is to inhibit the 5 α -reductase, 3 β -hydroxysteroid-dehydrogenase-(3 β -HSD), and 17 β -hydroxysteroid dehydrogenase-(17 β -HSD). Isoflavone will reduce the activity of the reseptor DHT, the lower of the activity of the reseptor DHT will effect the sebacea gland production. In this research we want to know how to treat acne vulgaris using soybean isoflavone and the best way to apply the isoflavone.

Methods :

This research used 30 BALB/c mice that was induce with P. Acne 15x10⁸ intradermal at the dorsal skin that will cause nodul to appear then divided into 5 groups. Control group using gold standar (tretinoin+ clindamicin topical + doxycyclin oral), P1 gold standar + doxycyclin oral+ 16 mg oral isoflavone, P2 16 mg oral isoflavone, P3 16 mg topical isoflavone, P4 16 mg oral + topical isoflavone. The duration of this research is 2 weeks.

Results :

The difference in mean amount of sebum was decrease significantly ($P < 0,05$) between groups, mean DHT receptor activity was decrease significantly ($P < 0,05$) between group, and mean histology of sebacea gland was also decrease significantly ($P < 0,05$) between group.

Conclusion :

This research concludes that 16 mg isoflavone can reduce the amount of sebum, inhibit the activity of DHT receptor and changes the histology of sebacea gland that will lead to the smaller amount of acne vulgaris and the best way to use isoflavone as a therapy is by using combination of 16 mg oral + topical isoflavone at the same time.

Key word : Acne vulgaris, dehydrotestosteron, isoflavone