

〈原著〉

尋常性痤瘡と脂質

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Acne Vulgaris and Lipids

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Abstract

The purpose of this study was to clarify the roles of sebum and serum lipids in the pathogenesis of acne vulgaris. Thirty-five patients with acne vulgaris, thirty-six volunteers with acne vulgaris and thirty-one normal controls without acne vulgaris were examined about the total amount and the components of the skin surface lipids and serum lipids.

The results showed:

- 1) The total skin surface lipids amounted to 2.930 mg/20 cm² in acne patients, 1.936 mg/20 cm² in acne volunteers and 1.321 mg/20 cm² in normal controls. There were statistically significant differences between each two groups ($p < 0.05$).
- 2) The total amount lipids at the five sites of the face (forehead, right cheek, left cheek, nose top, chin) showed the same tendency toward the total lipid measured by chromate oxidation method. Acne patients showed the highest value, next acne volunteers and the lowest was normal controls.
- 3) The free fatty acids ratio to the total lipids was highest in acne patients, next acne volunteers and the lowest was normal controls. In acne patients, there was remarkable increase in the ratio of triglycerides of the skin surface lipids. This results supported our concept that the ratio of triglycerides in sebum increases with the increase of the sebum secretion rate.
- 4) For the components of intra-comedonal lipids, the free fatty acids ratio was not increased compared with that of skin surface lipids as reported before. The cholesterol ratio was rather increased. This result suggested that the lipids of intracomedonal contents may not play a role of pathogenesis of acne vulgaris but may be the dead remnants of sebum and keratinocytes of follicular infundibulum.
- 5) No evidence that lipid peroxide concerns with the pathogenesis of acne vulgaris was gained from this study with young female subjects.
- 6) Some discussions were made from recent reports about the pathogenesis of acne vulgaris especially concerning with *P. acnes* and androgens, and it was suggested that the roles of the lipids of the skin surface or sebum may not be the initiating factors on microcomedones but may be secondary stimulants of inflammatory process which are thought to be initiated by the extracellular substances released from *P. acnes*.
- 7) The results of questionnaires to acne volunteers and normal controls were added to this report in order to understand the factors influencing the process of acne vulgaris and what acne volunteers want for treatment.

Key Words:

Acne vulgaris
Lipids

Pathogenesis
Skin surface lipids

Serum lipids