CLINICAL REPORT

PROJECT MANAGER
ERLING THOM, PhD

A 6 WEEK RANDOMIZED DOUBLE-BLIND STUDY OF LEROSETT® IN THE TREATMENT OF ACNE AND OILY SKIN

20 PEOPLE USING LEROSETT® **20 PEOPLE USING PLACEBO**

FEBRUARY 2000

The present study was carried out during the fall of 1999 in Norway. The purpose was to investigate the effect and tolerability of LEROSETT® involving the treatment of mild to moderate acne and oily skin.

Acne is a common dermatitis, which has been reported to affect up to 85% of adolescents. The endogenous processes governing acne initiation, development and its spontaneous resolution are not yet fully clarified. At present, increased sebaceous gland activity and abnormal follicular keratinization are considered to be the primary events leading to the manifestations of non-inflammatory, comedogenic acne. Increased propagation and activity of the follicular "Propionibacterium acnes" and subsequent follicular/perifollicular inflammation processes elicited by bacterial metabolic products are considered to be the pathogenic factors leading to the development of the inflammatory stages of acne.

Beyond a doubt, the product had a definite effect upon acne problems when compared to the placebo treatment. Of the 20 people using LEROSETT® **15** were much improved and with **five** people the acne was completely removed. The tolerability of the treatment was excellent and all subjects completed the study according to the directions.

LEROSETT® can be a valuable remedy in the over-the-counter (OTC) remedies for the treatment of acne and oily skin, so says

ERLING THOM, PhD
MEDSTAT RESEARCH
LILLESTROM, NORWAY

**Excerpts translated from Norwegian*

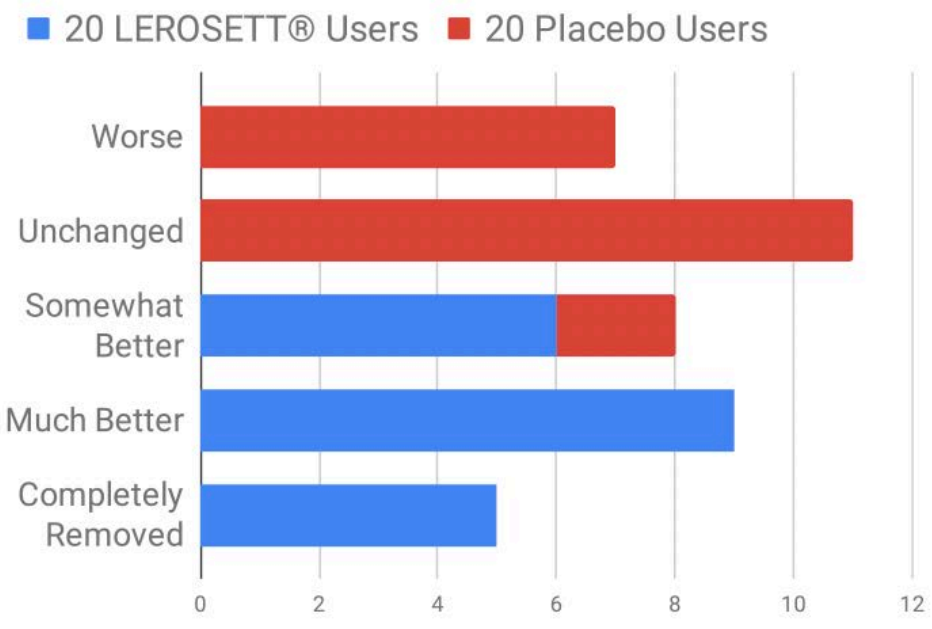
CLINICAL REPORT

COMPANY:
GUNILLA OF SWEDEN, INC
6500 W. 110th St., suite 100
Overland Park, KS 66211

PROJECT:
A RANDOMISED, PLACEBO -CONTROLLED, DOUBLE-BLIND STUDY OF LEROSETT® IN THE TREATMENT OF ACNE AND OILY SKIN

PROJECT COORDINATOR:
ERLING THOM, PhD
MEDSTAT RESEARCH AS
LILLESTROM, NORWAY

FEBRUARY 2000



SUMMARY

The present study was carried out during the fall of 1999 in Norway. The purpose was to investigate the effect and tolerability of LEROSETT® involving the treatment of mild to moderate acne and oily skin.

Beyond doubt, the product had a definite effect upon acne problems when compared to the Placebo treatment. The tolerablility of the treatment was excellent and all subjects completed the study according to the directions.

LEROSETT® can be a valuable remedy in the over-the-counter (OTC) armamentarium remedies for the treatment of acne and oily skin.

Lillestrom, Norway
February 2000

Erling Thom, Ph. D.

INTRODUCTION

Acne is a common dermatosis which has been reported to affect up to 85% of adolescents.

The endogenous processes governing acne initiation, development and its spontaneous resolution, are not yet fully clarified.

At present, increased sebaceous gland activity and abnormal follicular keratinization are considered to be the primary events leading to the manifestations of non-inflammatory, comeddonal acne. Increased propagation and activity of the follicular "Propionibacterium acnes" and subsequent follicular/perifollicular inflammation processes elicited by bacterial metabolic products are considered to be the pathogenetic factors leading to the development of the inflammatory stages of acne.

A number of products are available for the treatment of mild to moderate acne. Among all treatment substances, benzoyl peroxide and azelaic acid are the most frequently used. A number of other remedies are also available; however, none of these treatments is optimal. They have either a lack of effect or give a number of side effects--mainly dryness and/or redness of the skin.

LEROSETT® is an ointment based on clay. This ointment has been marketed in several countries as a tool for treatment of oily skin and acne. No formal clinical studies have been carried out; however, experiences from consumers have been very positive. Chemical analysis of the clay shows that it contains a number of different minerals. The mechanism of action for the ointment in the treatment of the above-mentioned ailments is not fully understood. Clinical experiences indicate that the ointment might have anti-infective as well as drying properties.

Based on the above-mentioned experiences, we decided to carry out a controlled study in the treatment of acne and oily skin.

The present study was initiated to investigate the efficacy and tolerablility of LEROSETT® in the treatment of acne and oily skin of the face.

DESIGN OF THE STUDY

The study was carried out as a randomised, double-blind, placebo-controlled study with two parallel groups. Forty subjects, ages 18 to 30 years of both genders with mild to moderate acne, according to Pillsbury, were recruited to the study. After having received verbal and written information about the study, the participants signed a consent form and were included in the study.

The study was carried out in accordance with the Declaration of Helenski and Good Clinical Practice (GCP) and local regulations.

The participants were randomised to receive LEROSETT® or Placebo treatment by a simple block randomisation procedure, using gender as a stratification factor.

LEROSETT® ointment and Placebo were supplied by XXXXXXXX in Falkoping, Sweden. The two products had similar appearances and cosmetic properties and were packed in similar tubes in order to meet the double-blind design.

The tubes contained 70 ml of either products.
The participants were instructed how to use the ointment. The total observation period in the study was 6 weeks, and the products were used as follows:

Week I:
Use once every day. The ointment was applied For 15-20 minutes and then removed with warm water.

Weeks 2-6:
Use once every third day. The ointment was applied for 15-20 minutes and then removed with warm water.
A moisturizing ointment was recommended as concomitant when needed.

PERFORMANCE OF THE STUDY

The participants were examined three times during the study--initially, after three and six weeks.

Clinical examinations of the acne status were done on each occasion. In addition, the participants carried out self-evaluations of the acne status.

On each occasion, the participants were asked if they had had any adverse events with the ointment.

STATISTICAL ANALYSIS

Assumed continuous variables were expressed by mean values and 95% confidence intervals constructed by student procedure. In addition to mean values, the location parameters were estimated by a median with 95% confidence intervals constructed by the Bermoulli-Wilcoxon procedure. The standard deviation and the total range were used as indices of distribution.

All tests, both inter- and intra- group, were carried out two- tailed with a significance level of 5%. Assumed continuously distributed variables were analyzed, using ANOVA models with repeated measurements, both for comparison between and within groups. SAS (version 6.0) software was used for all statistical analyses.

RESULTS

Forty subjects (20 females / 20 males) were included in the study. Twenty subjects were randomised to LEROSETT® and 20 subjected to the Placebo treatment. The gender distribution, age, severity of the acne, and the duration of acne were not significantly different in the two groups. These parameters in the two groups at baseline are shown in Table 1.

TABLE I:

COMPARISON OF THE TWO TREATMENT GROUPS AT BASELINE

LEROSETT® GROUP

NUMBER	GENDER	AGE	SEVERITY	DURATION
20	10 F / 10 M	19.7(3.0)	Pillsbury I	2.1 years

PLACEBO GROUP

NUMBER	GENDER	AGE	SEVERITY	DURATION
20	10F / 10M	20.3(3.2)	Pillsbury I	2.3 years

As shown in Table I, all participants were classified as having some of Grade Pillsbury I. The duration of the acne problems was 2.1 and 2.3 years in the two groups, respectively. The table shows that the two groups were comparable at the start of the study.

The participants were an average age of approximately 20 years. All the participants had tried several different products for their acne problems without satisfactory effect. All patients were rated according to Pillsbury, having acne problems Grade I.

According to the clinical observations made (on the global evaluation of acne on a scale of the following grading) the results were as shown in Table 2.

TABLE 2:

THE OVERALL TREATMENT RESULTS, AS JUDGED IN THE CLINICAL EXAMINATION AT THE END OF THE STUDY, WERE

CHANGE IN ACNE PROBLEMS

	NUMBER OF SUBJECTS	
	LEROSETT®	**Placebo**
WORSE		7
UNCHANGED		11
SOMEWHAT BETTER	6	2
MUCH BETTER	9	
COMPLETELY REMOVED	5	

The number of papules was also counted during the treatment on the left, the right and the front part of the face, respectively. There was a significant reduction of papules on the face, from an average of 25 at the start of the treatment to less than 5 at the end of the treatment period in the LEROSETT® group, but no significant reduction was seen in the Placebo group. This is in accordance with the subjective overall ratings of the therapeutic success given by Table 2.

The patients' self-evaluations of the therapy results are given in Table 3. As can be seen from this table, there is a clear improvement in the therapy results over time with LEROSETT®.

At the end of the treatment period, all subjects in the LEROSETT® group can be classified as having had positive results from the treatment. 15 out of 20 (75%) can be classified as better or much better. It is worthwhile to mention that 3 subjects had completely recovered after a treatment period of 5 weeks. It is a clear example of clinical effect over time. The results in the Placebo group show that only 2 of two subjects felt that they had had some improvement. The correlation between the rating of the treatment results made by the investigator and the patients is striking -as can be be seen by comparing Tables 2 and 3.

The tolerability of the treatment was good and comparable in the two groups. None of the subjects reported any adverse events that made them stop the treatment; however, dryness of the skin could have been a problem if the active treatment had been used aggressively. A moisturizing ointment was recommended as concomitant treatment.

TABLE 3:

SUBJECTS' SELF-EVALUATIONS OF THE THERAPY RESULTS OF THE THERAPY RESULTS IN THE LEROSETT® AND IN THE PLACEBO GROUP WERE AS FOLLOWS:

CHANGE IN ACNE PROBLEMS

	NUMBER OF SUBJECTS	
	LEROSETT®	**PLACEBO**
WORSE		8
UNCHANGED		10
SOMEWHAT BETTER	2	2
BETTER	9	
MUCH BETTER	6	
COMPLETELY RECOVERED	3	

CONCLUSION

The results from this study clearly indicate that LEROSETT® has an effect on the treatment of acne and oily skin over a period of 6 weeks.

The results are highly significant in favor of LEROSETT® as compared to the Placebo treatment.

It might be noted that an observation period of 6 weeks is too short to give the treatment full credit. Normally, the effect of the topical treatment of acne with other topical agents is seen 4-6 weeks after the start of treatment. LEROSETT® can be a valuable addition to treatment alternatives for mild to moderate acne.