CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: NDA 20-769

MEDICAL REVIEW(S)

ADDENDUM TO MEDICAL OFFICER'S REVIEW OF NDA 20-769

AUG 17 1997

July 31, 1997

SPONSOR: Pharmaquest Corporation
San Rafael, CA

DRUG: Locoid Lipocream (hydrocortisone butyrate 0.1%)

CLINICAL INDICATION: Corticosteroid-responsive dermatoses

REASON FOR ADDENDUM: Review of labeling submitted on July 2, 1997

The sponsor has submitted revised labeling in accordance with the discussion in the teleconference of June 16, 1997. The revision date on the labeling is June 1997.

This reviewer has the following comments on the clinical portion of the revised labeling, made in accordance with the teleconference and with the subsequent internal discussion during the labeling day meeting on June 16.

Phyllis A. Huene, M.D.

cc: Orig NDA
HFD-540
HFD-540/Huene
HFD-540/Cintron
HFD-540/DeCamp
HFD-540/Jacobs

JUN 09 1997

ADDENDUM TO MEDICAL OFFICER'S REVIEW OF NDA 20-769

May 5, 1997

SPONSOR: Pharmaquest Corporation
San Rafael, CA

DRUG: Locoid Lipocream (hydrocortisone butyrate 0.1%)

CLINICAL INDICATION: Corticosteroid-responsive dermatoses

Dr. Sue-Chih Lee, in her Biopharmaceutics review, noted that in the vasoconstrictor study Locoid Lipocream produced more vasoconstriction than did Locoid cream, and that there were no significant differences in vasoconstriction scores between Locoid Lipocream and Temovate cream. The adrenal suppression study which was submitted in the NDA was inadequate; the primary reason was that it was not performed on dermatitic skin. Because of this apparent greater potency of Locoid Lipocream as compared with Locoid Cream, it was felt that additional adrenal suppression studies should be done.

Prior to submission of the NDA the sponsor had sought our approval for adrenal suppression studies to be done as Phase IV studies, and we had informed them that this would be satisfactory. In general, adrenal suppression studies are not required for a line extension topical steroid, unless there is a difference in potency between the marketed steroid and the line extension formulation.

By teleconference of 4/21/97 (see the separate memorandum), the sponsor was informed that the lack of adequate adrenal suppression studies might affect the wording of the label for Locoid Lipocream. The sponsor was encouraged to perform adrenal suppression studies at this time, and to submit the results before a decision on approval is made. It was noted that these studies should be performed on dermatitic skin, and that the surface area of application and duration of treatment should be consistent with those in the proposed clinical usage. The sponsor indicated that they would consider this question and would inform us of their decision.

It is recommended by this reviewer that if adequate adrenal suppression studies are not submitted prior to the decision that the application is approvable, then the labeling should restrict the duration of usage to two weeks.

Phyllis A. Huene, M.D.

cc: Orig NDA
HFD-540
HFD-540/Huene
HFD-540/Anderson
HFD-540/DeCamp
HFD-540/Jacobs

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MEDICAL OFFICER'S REVIEW OF NDA 20-769
LOCOID LIPOCREAM

MEDICAL OFFICER'S REVIEW OF NDA 20-769
ORIGINAL SUBMISSION

January 6, 1997

SPONSOR: Pharmaquest Corporation
San Rafael, CA

DRUG: Locoid Lipocream (hydrocortisone butyrate 0.1%)

CLINICAL INDICATION: Corticosteroid-responsive dermatoses

FORMULATION:

Hydrocortisone butyrate	0.1%
Mineral oil	%
White petrolatum	%
Ceteth-20	%
Cetostearyl alcohol	%
Citric acid	%
Sodium citrate	%
Propyl paraben	%
Butyl paraben	%
Purified water qs ad	%

DATE OF SUBMISSION: August 30, 1996

RELATED NDAS: NDA 18-514 - Locoid cream 0.1%
NDA 18-652 - Locoid ointment 0.1%
NDA 19-116 - Locoid lotion 0.1%

PHARMACOLOGY AND CONTROLS REVIEWS: These are currently pending.

Rationale for use

Locoid Lipocream is qualitatively identical to Locoid Cream; it differs quantitatively in the vehicle components. The purpose of the formulation is to provide a product that is more acceptable in a wider range of conditions than either the ointment or cream forms, particularly for subacute and chronic dermatoses.

Foreign marketing history

Locoid Lipocream 0.1% is marketed in 30 countries. It has not been withdrawn from marketing in any country.

Clinical studies

A meeting between the sponsor and the Division of Anti-Infective Drug Products was held on October 8, 1992 to discuss the requirements for approval of an NDA for Locoid Lipocream with corticosteroid class labeling. In addition to a vasoconstriction

study, the Division requested a single controlled clinical study which compared Locoid Lipocream to the Lipocream vehicle. These studies are provided in this NDA, together with supportive data from European clinical studies.

1) Study 94-MCK-04: Vasoconstriction.

This was a single dose, double blind study, conducted by I. J. Terpstra, M.D., Leiderdorp, The Netherlands. The objective of the study was to determine the relative bioavailability of Locoid Lipocream as compared with Locoid Cream in a vasoconstriction assay using a high and low potency product as calibrators.

The study was conducted in 15 normal subjects, using the following test products.

1. Hytone cream (hydrocortisone 2.5%)
2. Temovate cream (clobetasol propionate 0.05%)
3. Locoid cream (hydrocortisone butyrate 0.1%)
4. Locoid Lipocream (hydrocortisone butyrate 0.1%)

Five circular sites were delineated on each volar forearm, and the precoded preparations were applied in aliquots of 10 ul per site. Each test product was applied to one skin site on each forearm, and one site on each forearm was left untreated. The test sites were then covered with a non-occlusive dressing. The allocation of the test sites was the same on both arms for each subject, but differed between subjects. The randomization of the skin sites was done according to a latin square design.

The products were left in place for 4 hours on one forearm, and for 11 hours on the other forearm, and were then washed off. Assessments of skin blanching were made at 1, 3, 5, 7, 21, and 24 hours after removal of the 4 hour applications, and at 1, 2, 4, 6, 8, 10, and 24 hours after removal of the 6 hour applications.

Visual scoring was done independently by two experienced clinical technicians, using the following scale.

0 = no blanching
1 = slight blanching
2 = obvious blanching
3 = pronounced blanching
4 = very intense blanching

Colorimetric measurements were also made using a Minolta Chromameter. The area under the curve for blanching vs time for the 24 hour period was then calculated for both types of assessments. Results were as follows.

Mean AUCs Time vs response curve				
	Visual scores		Chromameter scores	
	4 hrs	11 hrs	4 hrs	11 hrs
Hytone cream	0.40	1.58	0.28	- 0.34
Locoid Lipocream	24.48	33.03	31.97	32.66
Temovate cream	34.52	39.35	41.40	40.37
Locoid cream	14.58	20.05	18.07	26.46
Untreated	0.23	1.43	- 3.44	4.64

After statistical analysis of the results it was found that the discriminating potency of the visual scores was better than of the instrumental assessment of skin blanching. Therefore, this method was used to assess the potency differences in terms of AUC values between the test products. Findings were as follows.

1. Both Locoid preparations and Temovate had significantly higher scores than Hytone cream or untreated sites.
2. Temovate was superior to Locoid cream.
3. Locoid Lipocream was superior to Locoid cream.
4. After an application time of 11 hours there was no significant difference between Locoid Lipocream and Temovate.

<u>Study # 92-LOC-04</u>: Pivotal effectiveness study

The investigators for this study were:

Karl Beutner, M.D.
Vallejo, CA

Daniel Piacquadio, M.D.
San Diego, CA

1) Study objective: This was to demonstrate the safety and effectiveness of Locoid Lipocream 0.1% in the treatment of psoriasis.

2) Study design: This was a double blind, randomized, parallel group, multicenter comparison of Locoid Lipocream 0.1% to the Lipocream vehicle in patients with psoriasis.

3) Patient selection: The following patients were included in the study.

a. Healthy patients aged 12 years and older.
b. Males and females who were not pregnant or lactating.
c. Patients with moderate plaque psoriasis, defined as having a minimum total score of 6 (on the scale described below) for the sum of the scores for scaling, erythema, induration, and pruritus.

4) Patient exclusions: Patients were excluded from the study for the following reasons or conditions.

a. Use of any topical treatments known to have a beneficial effect on psoriasis within two weeks of initiation of the study.
b. Use of any systemic medications for inflammatory skin disease, or for any other disease which could interfere with the assessment of study results, within four weeks of initiation of the study.
c. History of adverse response to topical or systemic steroid therapy.
d. An immunocompromised state.
e. Pustular, guttate, or generalized non-plaque form of psoriasis.
f. Psoriasis which would require the use of other concomitant therapies during the study.
g. Primary bacterial or viral skin lesions.
h. Secondary infection.
i. Pregnancy or lactation.
j. Women of childbearing potential who were not using reliable contraception.
k. Endocrinological disorders which would either interfere with the assessment of study results or contraindicate treatment with potent corticosteroids.
l. An unstable concomitant disease.
m. Treatment with a special diet that might alter the psoriasis.
n. Psoriasis that appeared to be spontaneously improving without treatment.
o. A systemic infection that had a likelihood of causing a psoriasis flare.
p. Malignant disease.
q. Use of an investigational drug within four weeks prior to the study, or concurrent enrollment in another study.
r. History of alcoholism, drug abuse, psychosis, or other mental or emotional problems that might limit the validity of the patient consent.
s. Other factors which might interfere with compliance with various aspects of the study.

5) Treatment regimen: Applications of the test products were made BID for up to four weeks.

6) Effectiveness parameters: Efficacy evaluations were to be done at baseline, day 15 and day 29 on a selected target lesion, as follows.

a. Clinical signs and symptoms. Scaling, erythema, induration, and pruritus were scored at each visit on the following scales.

Scaling

0 = no scales.
1 = minute, powdery scales, such as in pityriasis rosea or *T. rubrum* infection of the palms.
2 = thin flakes, such as in tinea versicolor lesions.
3 = scales covering most of the lesions, as in untreated plaque-like or nummular psoriasis. The scales are adherent and cover the erythema.
4 = Very thick scales, as in advanced psoriasis of elbows or scalp or pityriasis sicca of the tinea-amiantacea type.

Erythema

0 = skin of normal color, no detectable erythema.
1 = mild, barely detectable erythema, like that in early syphilitic roseola.
2 = pronounced erythema, but not yet deep red, like noninflammatory pityriasis rosea.
3 = more marked redness, as in the early phase of urticaria, but less marked than 4.
4 = typical erythema of untreated psoriatic plaque after removal of scales.

Induration

0 = no palpable induration.
1 = very minor induration, like that in nummular eczema.
2 = easily palpable induration, as in granuloma annulare. The lesions may be slightly raised above the level of the surrounding normal or uninvolved epidermis.
3 = definitely elevated lesions with easily palpable induration, as in untreated nummular or plaque-like psoriasis.
4 = elevated lesions with severe induration or lichenification, as in neurodermatitis circumscripta and lichen verrucosis.

Pruritus

0 = no complaint of pruritus.
1 = pruritus causing very little discomfort, as in tinea versicolor and pityriasis rosea.
2 = the patient complains of itching, not disturbing night sleep. This degree is common in mild atopic dermatitis. Excoriations may occur.
3 = troublesome pruritus, as in severe atopic dermatitis. The symptom is often worse at bedtime and may cause insomnia. The patient may haye marked excoriations and/or lichenification.
4 = severe, distressing pruritus, keeping the patient awake or waking him/her during the night. This degree is seen in neurodermatitis (where lichenification and severe excoriations are seen), in scabies, and in acute allergic urticaria.

At baseline the total score of the clinical signs and symptoms of the target lesions was to be at least 6, with a score of at least two for each of the signs scaling, erythema, and induration.

b. Physician assessment of overall disease severity. This was done at days 15 and 29, using the following scale.

Overall disease severity

0 = none - complete absence of any sign or symptom.
1 = minimal - barely discernible involvement.
2 = mild - obvious but minimal involvement.
3 = moderate - something that is easily noted.
4 = severe - quite marked.

c. Physician rating of global clinical response. This was done at days 15 and 29, using the following scale.

Clinical cure -	Complete improvement from baseline.
Marked improvement -	Approximately 75% or more improvement, but less than complete improvement.
Moderate improvement -	Approximately 50% or more improvement, but less than 75% improvement.
Slight improvement -	Less than 50% improvement.
No change -	No detectable improvement.
Exacerbation -	Increase in overall severity of the condition.

d. Patient rating of clinical response. At days 15 and 29 the patient rated the overall response to treatment and the tolerance to treatment on the following scale.

0 = poor
1 = fair
2 = good
3 = very good
4 = excellent

7) Safety assessments: At each return visit the patients were queried as to symptoms or side effects.

Results were as follows.

1) Patient enrollment and demographic characteristics: 67 patients were enrolled into the study, of which 35 were treated with Locoid Lipocream and 32 were treated with the vehicle. All patients had at least one follow-up visit and were considered to be evaluable for effectiveness.

The demographic and baseline disease characteristics were as follows.

Demographic characteristics			
	Locoid Lipocream	Vehicle	p-value
Age			
Mean	45	46	
Range	[redacted]	[redacted]	[redacted]
Sex			
Male	12 (34%)	11 (34%)	
Female	23 (66%)	21 (66%)	1.000
Race			
Caucasian	30 (86%)	28 (88%)	
Black	1 (3%)	1 (3%)	
Asian	1 (3%)	1 (3%)	
Hispanic	3 (9%)	2 (6%)	
Other	0	0	1.000

Baseline disease characteristics			
	Locoid Lipocream	Vehicle	p-value
Scaling			
no scales	0	0	
minute scales	0	0	
thin scales	18 (51%)	13 (41%)	
scales	12 (34%)	16 (50%)	0.601
very thick scales	5 (14%)	3 (9%)	
Erythema			
normal skin color	0	0	
mild	0	0	
pronounced redness	23 (66%)	22 (69%)	
marked redness	9 (26%)	9 (28%)	0.697
typical erythema	3 (9%)	1 (3%)	
Induration			
not palpable	0	0	
very minor	0	0	
easily palpable	25 (71%)	17 (53%)	
elevated lesions	6 (17%)	15 (47%)	0.295
severe lesions	4 (11%)	0	
Pruritus			
no complaint	4 (11%)	3 (9%)	
little discomfort	8 (23%)	6 (19%)	
itching complaints	13 (37%)	15 (47%)	
troublesome	6 (17%)	6 (19%)	0.995
severe	4 (11%)	2 (6%)	
Overall severity			
none	0	0	
minimal	1 (3%)	0	
mild	11 (31%)	7 (22%)	
moderate	14 (40%)	20 (63%)	0.730
severe	9 (26%)	5 (16%)	
Duration of current episode (wks)			
mean	98	98	0.631
range	[redacted]	[redacted]	

2) Patient disposition: One patient on the vehicle terminated the study before day 29 due to an adverse experience which was not considered to be drug-related; all others remained in the study through day 29.

3) Efficacy parameters.

a. Clinical signs and symptoms.

The distribution of scores at days 15 and at endpoint were as follows.

Scaling			
	Locoid Lipocream	Vehicle	p-value
Day 15			
no scales	12 (34%)	3 (9%)	
minute scales	15 (43%)	13 (41%)	
thin scales	8 (23%)	12 (38%)	
adherent scales	0	3 (9%)	0.002
very thick scales	0	1 (3%)	
mean	0.9	1.6	
Endpoint			
no scales	14 (40%)	3 (9%)	
minute scales	15 (43%)	18 (56%)	
thin scales	6 (17%)	8 (25%)	
scales	0	3 (9%)	0.003
very thick scales	0	0	
mean	0.8	1.3	

Erythema			
	Locoid Lipocream	Vehicle	p-value
Day 15			
normal skin color	0	0	
mild	9 (26%)	5 (16%)	
pronounced redness	23 (66%)	14 (44%)	
marked redness	3 (9%)	10 (31%)	0.006
typical erythema	0	3 (9%)	
mean	1.8	2.3	
Endpoint			
normal skin color	3 (9%)	0	
mild	15 (43%)	7 (22%)	
pronounced redness	14 (40%)	15 (47%)	
marked redness	3 (9%)	10 (31%)	0.003
typical erythema	0	0	
mean	1.5	2.1	

Induration			
	Locoid Lipocream	Vehicle	p-value
Day 15			
not palpable	4 (11%)	0	
very minor	11 (31%)	5 (16%)	
easily palpable	17 (49%)	24 (75%)	
elevated lesions	1 (3%)	3 (9%)	0.028
severe lesions	2 (6%)	0	
mean	1.6	1.9	
Endpoint			
not palpable	9 (26%)	0	
very minor	11 (31%)	7 (22%)	
easily palpable	14 (40%)	22 (69%)	
elevated lesions	1 (3%)	3 (9%)	0.001
severe lesions	0	0	
mean	1.2	1.9	

Pruritus			
	Locoid Lipocream	Vehicle	p-value
Day 15			
no complaint	15 (43%)	7 (22%)	
little discomfort	12 (34%)	11 (34%)	
itching complaints	5 (14%)	11 (34%)	
troublesome	3 (9%)	2 (6%)	0.050
severe	0	1 (3%)	
mean	0.9	1.3	
Endpoint			
no complaint	23 (66%)	15 (47%)	
little discomfort	6 (17%)	9 (28%)	
itching complaints	3 (9%)	4 (13%)	
troublesome	3 (9%)	2 (6%)	0.144
severe	0	2 (6%)	
mean	0.6	1.0	

Total lesion scores			
	Locoid Lipocream	Vehicle	p-value
Baseline			
mean	9.4	9.4	0.936
Day 15			
mean	5.2	7.2	0.000
mean change	- 4.2	- 2.3	0.002
Endpoint			
mean	4.1	6.3	0.000
mean change	- 5.3	- 3.2	0.002

b. Physician's assessment of overall disease severity.

The distribution of overall disease severity at day 15 and at endpoint was as follows.

Overall disease severity			
	Locoid Lipocream	Vehicle	p-value
Day 15			
none	0	0	
minimal	3 (9%)	1 (3%)	
mild	14 (40%)	11 (34%)	
moderate	13 (37%)	16 (50%)	0.429
severe	5 (14%)	4 (13%)	
Endpoint			
none	1 (3%)	0	
minimal	8 (23%)	1 (3%)	
mild	12 (34%)	12 (38%)	
moderate	11 (31%)	13 (41%)	0.025
severe	3 (9%)	6 (19%)	

c. Physician's assessment of global clinical response.

The distribution of clinical responses at day 15 and at endpoint was as follows.

Clinical response - physician assessment			
	Locoid Lipocream	Vehicle	p-value
Day 15			
cure	0	0	
marked improvement	6 (17%)	0	
moderate improvement	6 (17%)	3 (9%)	
slight improvement	13 (37%)	14 (44%)	0.009
no change	10 (29%)	15 (47%)	
exacerbation	0	0	
Endpoint			
cure	2 (6%)	0	
marked improvement	11 (31%)	0	
moderate improvement	4 (11%)	6 (19%)	
slight improvement	14 (40%)	14 (44%)	0.001
no change	4 (11%)	12 (38%)	
exacerbation	0	0	

d. Patient rating of clinical response.

The distribution of clinical responses at day 15 and at endpoint was as follows.

Clinical response - patient assessment			
	Locoid Lipocream	Vehicle	p-value
Day 15			
excellent	5 (14%)	1 (3%)	
very good	10 (29%)	1 (3%)	
good	7 (20%)	13 (41%)	
fair	8 (23%)	8 (25%)	0.013
poor	5 (14%)	9 (28%)	
Endpoint			
excellent	5 (14%)	1 (3%)	
very good	11 (31%)	4 (13%)	
good	8 (23%)	9 (28%)	
fair	6 (17%)	8 (25%)	0.007
poor	5 (14%)	10 (31%)	

4) Adverse events. Four patients had a drug related adverse event; these comprised 3 in the Locoid Lipocream group and 1 in the vehicle group. One Locoid Lipocream patient reported moderate burning, and treatment was interrupted for two days. Another Locoid Lipocream patient had mild, but increased erythema, and tingling of treated areas. A third Locoid Lipocream patient had mild tingling at the time of application. One vehicle patient had itching and an erythematous rash of the face, and the patient ceased treatment to these areas.

One vehicle patient dropped out of the study because of malaise/drowsiness, which was not considered to be drug related.

Reviewer's comments: In summary, this study showed a significant superiority of Locoid Lipocream over the vehicle in the effect on scaling, erythema, and induration, but not pruritus. There was also a significant superiority of Locoid Lipocream over the vehicle in the physician's assessment of overall disease severity and global clinical response, and in the patient's assessment of clinical response. Adverse events were mild or transient irritation in 3 Locoid Lipocream patients, and an erythematous rash of the face in one vehicle patient.

Other clinical studies

Three additional clinical studies were performed in Europe.

1. Study # 90-LOC-01.

This study was a double blind, paired lesion comparison of Locoid Lipocream and triamcinolone acetonide 0.1% FNA ointment in the treatment of patients with dry, chronic eczema. Applications were made BID for up to four weeks. The effectiveness parameters and scoring methods were similar to those in the pivotal efficacy study.

Sixty-one evaluable patients completed the study. It was found that there were significant reduction in the severity scores for erythema, induration, scaling, and pruritus with both test preparations. Triamcinolone acetonide FNA ointment was significantly superior to Locoid Lipocream in the reduction of scaling and total symptom scores at 2 weeks, and scaling scores at 4 weeks. In the investigator rating of improvement, triamcinolone acetonide FNA ointment was better than Locoid Lipocream, but the difference was not statistically significant. In the patient's rating of improvement, triamcinolone acetonide FNA ointment was significantly superior to Locoid Lipocream.

Adverse effects were reported in 3 patients. In one patient there was a "violent reaction", not further described, at the site treated with Locoid Lipocream. A second patient had pustulosis and folliculitis at the Locoid site, and a third patient had follicular pustules at both the Locoid and the triamcinolone acetonide sites.

2. Study 91-LOC-01.

This was a randomized, double blind comparison of Locoid Lipocream 0.1% once daily and twice daily in the treatment of patients with atopic dermatitis. Applications were made for up to four weeks. The effectiveness parameters were similar to those in the previous studies.

A total of 150 patients participated in the study. Patients in both groups showed marked improvement during the course of the study, with highly significant decreases in all symptoms. After two weeks of treatment the BID group showed a significantly greater reduction in the severity of symptoms. In both the investigator's and the patient's assessment of overall improvement the BID regimen was significantly superior to the QD regimen.

Adverse events occurred in four patients in each treatment group. In the QD group one patient developed folliculitis of treated areas and treatment was discontinued. Three patients in the QD group had burning, itching, or stinging after application, but did not

discontinue treatment. Four patients in the BID group developed folliculitis, which in one was not in the treated area; all were continued on treatment.

3. Study 92-LOC-02.

This was a comparative study on the adrenal suppressive effect of Locoid Lipocream 0.1% and Elocon (0.1% mometasone furoate) cream in 12 normal subjects. The design was an open label, randomized, two period crossover study, with an interval of 14 days between the first applications in each period.

Each study period was of 15 days duration. On days 3, 4, 5, 6, and 7 applications of 16 gm of either product were made to the torso of each subject, followed by occlusion for 11 hours. On days 1 and 8 the subjects were given 0.25 mg tetracosactide I.M. (Synacthen test). Blood samples for plasma cortisol levels and ACTH were taken on days 1, 8, and 15.

Results were that there was a significant suppression of plasma cortisol levels with both formulations, and a significantly greater suppression with Elocon than with Locoid Lipocream 0.1%. There were no significant differences in plasma cortisol concentrations before and after each treatment, and the Synacthen test showed normal rises in plasma cortisol concentrations after treatment. ACTH concentrations at all times were comparable and showed no changes during the study.

Adverse events that were possibly or probably related to the test products were as follows.

Adverse events		
	Locoid	Elocon
Erythema	9	11
Macular exanthem	0	1
Papular exanthem	10	9
Erythematous pustule	1	0
Itching	6	3
Burning	1	3
Warmth of skin	1	0
Dry skin	2	4

Labeling review: The text of the proposed labeling is the same as the presently approved labeling for Locoid cream and Locoid ointment, except for the addition of references to Locoid Lipocream 0.1% to the following sections: Description, Indications and Usage, Dosage and Administration, How Supplied, and Storage. The labeling is felt to be acceptable.

Summary and evaluation: Locoid Lipocream is a line extension of Locoid cream, ointment, and lotion. In accordance with our requirements for a line extension of a topical steroid, the sponsor has performed a vasoconstrictor assay and a single clinical study in patients with psoriasis.

The vasoconstrictor assay showed that Locoid Lipocream is more potent than Hytone cream or Locoid cream, and less potent than Temovate cream.

The clinical study was a double blind comparison of Locoid Lipocream with its vehicle in the treatment of 67 patients with psoriasis. Applications were made BID for up to four weeks. The efficacy parameters were a rating of the clinical signs and symptoms scaling, erythema, induration, and pruritus, a physician rating of overall disease severity and global clinical response, and a patient rating of the clinical response.

The results showed a significant superiority of Locoid Lipocream over its vehicle in all effectiveness parameters except the effect on pruritus. It is felt that this study adequately demonstrates the effectiveness of Locoid Lipocream for the class labeling indication, namely, the treatment of corticosteroid-responsive dermatoses.

Recommendations: It is recommended that this NDA for Locoid Lipocream for the treatment of corticosteroid-responsive dermatoses be approved.

Phyllis A. Huene, M.D.

cc: Orig NDA
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