

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 3

Dovonex[®]

(calcipotriene solution)

Scalp Solution, 0.005%

Rx only

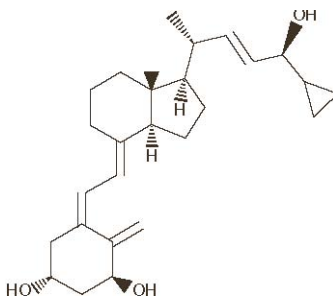
FOR TOPICAL DERMATOLOGIC USE ONLY.

Not for Ophthalmic, Oral or Intravaginal Use.

DESCRIPTION

Dovonex[®] (calcipotriene solution) Scalp Solution, 0.005% is a colorless topical solution containing 0.005% calcipotriene in a vehicle of isopropanol (51% v/v), propylene glycol, hydroxypropyl cellulose, sodium citrate, menthol and water.

The chemical name of calcipotriene is (5Z,7E,22E,24S)-24-cyclopropyl-9,10-secocholela-5,7,10(19),22tetraene-1 α ,3 β ,24-triol, with the empirical formula C₂₇H₄₀O₃, a molecular weight of 412.6, and the following structural formula:



CLINICAL PHARMACOLOGY

In humans, the natural supply of vitamin D depends mainly on exposure to the ultraviolet rays of the sun for conversion of 7-dehydrocholesterol to vitamin D₃ (cholecalciferol) in the skin. Calcipotriene is a synthetic analog of vitamin D₃.

Although the precise mechanism of calcipotriene's antipsoriatic action is not fully understood, *in vitro* evidence suggests that calcipotriene is roughly equipotent to the natural vitamin in its effects on proliferation and differentiation of a variety of cell types. Calcipotriene has also been shown, in animal studies, to be 100-200 times less potent in its effects on calcium utilization than the natural hormone.

Clinical studies with radiolabelled calcipotriene solution indicate that less than 1% of the applied dose of calcipotriene is absorbed through the scalp when the solution (2.0 mL) is applied topically to normal

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 4

skin or psoriasis plaques (160 cm²) for 12 hours, and that much of the absorbed calcipotriene is converted to inactive metabolites within 24 hours of application.

Vitamin D and its metabolites are transported in the blood, bound to specific plasma proteins. The active form of the vitamin, 1,25-dihydroxy vitamin D₃ (calcitriol), is known to be recycled via the liver and excreted in the bile. Calcipotriene metabolism following systemic uptake is rapid, and occurs via a similar pathway to the natural hormone. The primary metabolites are much less potent than the parent compound.

There is evidence that maternal 1,25-dihydroxy vitamin D₃ (calcitriol) may enter the fetal circulation, but it is not known whether it is excreted in human milk. The systemic disposition of calcipotriene is expected to be similar to that of the naturally occurring vitamin.

CLINICAL STUDIES

Adequate and well-controlled trials of patients treated with Dovonex[®] Scalp Solution, 0.005%, have demonstrated improvement usually beginning after 2 weeks of therapy. This improvement continued with approximately 31% of patients appearing either cleared (14%) or almost cleared (17%) after 8 weeks of therapy.

INDICATIONS AND USAGE

Dovonex[®] (calcipotriene solution) Scalp Solution, 0.005%, is indicated for the topical treatment of chronic, moderately severe psoriasis of the scalp. The safety and effectiveness of topical calcipotriene in dermatoses other than psoriasis have not been established.

CONTRAINDICATIONS

Dovonex[®] Scalp Solution, 0.005%, is contraindicated in those patients with acute psoriatic eruptions or a history of hypersensitivity to any of the components of the preparation. It should not be used by patients with demonstrated hypercalcemia or evidence of vitamin D toxicity.

WARNINGS

Avoid contact with the eyes or mucous membranes. Discontinue use if a sensitivity reaction occurs or if excessive irritation develops on uninvolved skin areas.

Drug product is flammable. Keep away from open flame.

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 5

PRECAUTIONS

General

Use of Dovonex[®] Scalp Solution, 0.005%, may cause transient irritation of both lesions and surrounding uninvolved skin. If irritation develops, Dovonex[®] Scalp Solution, 0.005%, should be discontinued.

For external use only. Keep out of the reach of children. Always wash hands thoroughly after use.

Reversible elevation of serum calcium has occurred with use of topical calcipotriene. If elevation in serum calcium outside the normal range should occur, discontinue treatment until normal calcium levels are restored.

Information for Patients

Patients using Dovonex[®] Scalp Solution, 0.005%, should receive the following information and instructions:

1. This medication is to be used only as directed by the physician. It is for external use only. Avoid contact with the face or eyes. As with any topical medication, patients should wash their hands after application.
2. This medication should not be used for any disorder other than that for which it was prescribed.
3. Patients should report to their physician any signs of adverse reactions.
4. Patients that apply Dovonex[®] to exposed portions of the body should avoid excessive exposure to either natural or artificial sunlight (including tanning booths, sun lamps, etc.).

Carcinogenesis, Mutagenesis, Impairment of Fertility

When calcipotriene was applied topically to mice for up to 24 months at dosages of 3, 10 and 30 $\mu\text{g}/\text{kg}/\text{day}$ (corresponding to 9, 30 and 90 $\mu\text{g}/\text{m}^2/\text{day}$), no significant changes in tumor incidence were observed when compared to control. In a study in which albino hairless mice were exposed to both UVR and topically applied calcipotriene, a reduction in the time required for UVR to induce the formation of skin tumors was observed (statistically significant in males only), suggesting that calcipotriene may enhance the effect of UVR to induce skin tumors. Patients that apply Dovonex[®] to exposed portions of the body should avoid excessive exposure to either natural or artificial sunlight (including tanning booths, sun lamps, etc.). Physicians may wish to limit or avoid use of phototherapy in patients that use Dovonex[®].

Calcipotriene did not elicit any mutagenic effects in an Ames mutagenicity assay, a mouse lymphoma TK locus assay, a human lymphocyte chromosome aberration assay, or in a micronucleus assay conducted in mice.

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 6

Studies in rats at doses up to 54 $\mu\text{g}/\text{kg}/\text{day}$ (324 $\mu\text{g}/\text{m}^2/\text{day}$) of calcipotriene indicated no impairment of fertility or general reproductive performance.

Pregnancy

Teratogenic Effects: Pregnancy Category C

Studies of teratogenicity were done by the oral route where bioavailability is expected to be approximately 40-60% of the administered dose. Increased rabbit maternal and fetal toxicity was noted at 12 $\mu\text{g}/\text{kg}/\text{day}$ (132 $\mu\text{g}/\text{m}^2/\text{day}$). Rabbits administered 36 $\mu\text{g}/\text{kg}/\text{day}$ (396 $\mu\text{g}/\text{m}^2/\text{day}$) resulted in fetuses with a significant increase in the incidences of pubic bones, forelimb phalanges, and incomplete bone ossification. In a rat study, oral doses of 54 $\mu\text{g}/\text{kg}/\text{day}$ (318 $\mu\text{g}/\text{m}^2/\text{day}$) resulted in a significantly higher incidence of skeletal abnormalities consisting primarily of enlarged fontanelles and extra ribs. The enlarged fontanelles are most likely due to calcipotriene's effect upon calcium metabolism. The maternal and fetal calculated no-effect exposures in the rat (43.2 $\mu\text{g}/\text{m}^2/\text{day}$) and rabbit (17.6 $\mu\text{g}/\text{m}^2/\text{day}$) studies are greater than the expected human systemic exposure level (0.13 $\mu\text{g}/\text{m}^2/\text{day}$) from dermal application. There are no adequate and well-controlled studies in pregnant women. Therefore, Dovonex[®] Scalp Solution, 0.005%, should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers

There is evidence that maternal 1,25-dihydroxy vitamin D₃ (calcitriol) may enter the fetal circulation, but it is not known whether it is excreted in human milk. The systemic disposition of calcipotriene is expected to be similar to that of the naturally occurring vitamin. Because many drugs are excreted in human milk, caution should be exercised when Dovonex[®] (calcipotriene solution) Scalp Solution, 0.005%, is administered to a nursing woman.

Pediatric Use

Safety and effectiveness of Dovonex[®] Scalp Solution, 0.005%, in pediatric patients have not been specifically established. Because of a higher ratio of skin surface area to body mass, pediatric patients are at greater risk than adults of systemic adverse effects when they are treated with topical medication.

Geriatric Use

Of the total number of patients in clinical studies of calcipotriene solution, approximately 16% were 65 or older, while approximately 4% were 75 and over. The results of an analysis of severity of skin-related adverse events showed no differences for subjects over 65 years compared to those under 65 years, but greater sensitivity of some older individuals cannot be ruled out.

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 7

ADVERSE REACTIONS

In controlled clinical trials, the most frequent adverse reactions reported to be related to Dovonex[®] Scalp Solution, 0.005%, use were transient burning, stinging and tingling, which occurred in approximately 23% of patients. Rash was reported in about 11% of patients. Dry skin, irritation and worsening of psoriasis were reported in 1-5% of patients. Skin atrophy, hyperpigmentation, hypercalcemia, and folliculitis were not observed in these studies, but cannot be excluded.

OVERDOSAGE

Topically applied calcipotriene can be absorbed in sufficient amounts to produce systemic effects. Elevated serum calcium has been observed with excessive use of topical calcipotriene. If elevation in serum calcium should occur, discontinue treatment until normal calcium levels are restored. (See **PRECAUTIONS.**)

DOSAGE AND ADMINISTRATION

Comb the hair to remove scaly debris and after suitably parting, apply Dovonex[®] Scalp Solution, 0.005%, twice daily, only to the lesions, and rub in gently and completely, taking care to prevent the solution spreading onto the forehead. The safety and efficacy of Dovonex[®] Scalp Solution, 0.005%, have been demonstrated in patients treated for eight weeks.

Keep Dovonex[®] Scalp Solution, 0.005%, well away from the eyes. Avoid application of the solution to uninvolved scalp margins. **Always wash hands thoroughly after use.**

HOW SUPPLIED

Dovonex[®] (calcipotriene solution) Scalp Solution, 0.005% is available in 60 mL plastic bottles N 0430-3030-15

STORAGE

Store at controlled room temperature 15° C - 25° C (59° F - 77° F). Avoid sunlight. Do not freeze.

LEO[®]



Manufactured by LEO Pharmaceutical Products, Ltd.
Ballerup, Denmark

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 8



Marketed by:
Warner Chilcott (US), Inc.
Rockaway, NJ 07866 USA
U.S. Patent No. 4,866,048

3030G032 – Trade PI

3030G102 – Sample PI

Revised XXX 2007

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 9

Dovonex[®]

(calcipotriene cream)

Cream, 0.005%

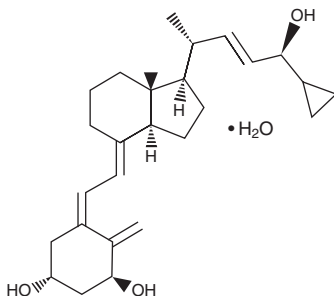
Rx only

FOR TOPICAL DERMATOLOGIC USE ONLY.
Not for Ophthalmic, Oral or Intravaginal Use.

DESCRIPTION

Dovonex[®] (calcipotriene cream) Cream, 0.005% contains calcipotriene monohydrate, a synthetic vitamin D₃ derivative, for topical dermatological use.

Chemically, calcipotriene monohydrate is (5Z,7E,22E,24S)-24-cyclopropyl-9,10-secocholesta-5,7,10(19),22-tetraene-1 α ,3 β ,24-triol monohydrate, with the empirical formula C₂₇H₄₀O₃•H₂O, a molecular weight of 430.6, and the following structural formula:



Calcipotriene monohydrate is a white or off-white crystalline substance. Dovonex[®] Cream contains calcipotriene monohydrate equivalent to 50 μ g/g anhydrous calcipotriene in a cream base of cetaryl alcohol, ceteth-20, diazolidinyl urea, dichlorobenzyl alcohol, dibasic sodium phosphate, edetate disodium, glycerin, mineral oil, petrolatum, and water.

CLINICAL PHARMACOLOGY

In humans, the natural supply of vitamin D depends mainly on exposure to the ultraviolet rays of the sun for conversion of 7-dehydrocholesterol to vitamin D₃ (cholecalciferol) in the skin. Calcipotriene is a synthetic analog of vitamin D₃.

Clinical studies with radiolabelled calcipotriene ointment indicate that approximately 6% (\pm 3%, SD) of the applied dose of calcipotriene is absorbed systemically when the ointment is applied topically to psoriasis plaques, or 5% (\pm 2.6%, SD) when applied to normal skin, and much of the absorbed active is

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 10

converted to inactive metabolites within 24 hours of application. Systemic absorption of the cream has not been studied.

Vitamin D and its metabolites are transported in the blood, bound to specific plasma proteins. The active form of the vitamin, 1,25-dihydroxy vitamin D₃ (calcitriol), is known to be recycled via the liver and excreted in the bile. Calcipotriene metabolism following systemic uptake is rapid, and occurs via a similar pathway to the natural hormone.

CLINICAL STUDIES

Adequate and well-controlled trials of patients treated with Dovonex[®] Cream have demonstrated improvement usually beginning after 2 weeks of therapy. This improvement continued with approximately 50% of patients showing at least marked improvement in the signs and symptoms of psoriasis after 8 weeks of therapy, but only approximately 4% showed complete clearing.

INDICATIONS AND USAGE

Dovonex[®] (calcipotriene cream) Cream, 0.005%, is indicated for the treatment of plaque psoriasis. The safety and effectiveness of topical calcipotriene in dermatoses other than psoriasis have not been established.

CONTRAINDICATIONS

Dovonex[®] Cream is contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation. It should not be used by patients with demonstrated hypercalcemia or evidence of vitamin D toxicity. Dovonex[®] Cream should not be used on the face.

PRECAUTIONS

General

Use of Dovonex[®] Cream may cause transient irritation of both lesions and surrounding uninvolved skin. If irritation develops, Dovonex[®] Cream should be discontinued.

For external use only. Keep out of the reach of children. Always wash hands thoroughly after use.

Reversible elevation of serum calcium has occurred with use of topical calcipotriene. If elevation in serum calcium outside the normal range should occur, discontinue treatment until normal calcium levels are restored.

Information for Patients

Patients using Dovonex[®] Cream should receive the following information and instructions:

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 11

5. This medication is to be used only as directed by the physician. It is for external use only. Avoid contact with the face or eyes. As with any topical medication, patients should wash their hands after application.
6. This medication should not be used for any disorder other than that for which it was prescribed.
7. Patients should report to their physician any signs of adverse reactions.
8. Patients that apply Dovonex[®] to exposed portions of the body should avoid excessive exposure to either natural or artificial sunlight (including tanning booths, sun lamps, etc.).

Carcinogenesis, Mutagenesis, Impairment of Fertility

When calcipotriene was applied topically to mice for up to 24 months at dosages of 3, 10 and 30 $\mu\text{g}/\text{kg}/\text{day}$ (corresponding to 9, 30 and 90 $\mu\text{g}/\text{m}^2/\text{day}$), no significant changes in tumor incidence were observed when compared to control. In a study in which albino hairless mice were exposed to both UVR and topically applied calcipotriene, a reduction in the time required for UVR to induce the formation of skin tumors was observed (statistically significant in males only), suggesting that calcipotriene may enhance the effect of UVR to induce skin tumors. Patients that apply Dovonex[®] to exposed portions of the body should avoid excessive exposure to either natural or artificial sunlight (including tanning booths, sun lamps, etc.). Physicians may wish to limit or avoid use of phototherapy in patients that use Dovonex[®].

Calcipotriene did not elicit any mutagenic effects in an Ames mutagenicity assay, a mouse lymphoma TK locus assay, a human lymphocyte chromosome aberration assay, or in a micronucleus assay conducted in mice.

Studies in rats at doses up to 54 $\mu\text{g}/\text{kg}/\text{day}$ (324 $\mu\text{g}/\text{m}^2/\text{day}$) of calcipotriene indicated no impairment of fertility or general reproductive performance.

Pregnancy

Teratogenic Effects: Pregnancy Category C

Studies of teratogenicity were done by the oral route where bioavailability is expected to be approximately 40-60% of the administered dose. Increased rabbit maternal and fetal toxicity was noted at 12 $\mu\text{g}/\text{kg}/\text{day}$ (132 $\mu\text{g}/\text{m}^2/\text{day}$). Rabbits administered 36 $\mu\text{g}/\text{kg}/\text{day}$ (396 $\mu\text{g}/\text{m}^2/\text{day}$) resulted in fetuses with a significant increase in the incidences of pubic bones, forelimb phalanges, and incomplete bone ossification. In a rat study, oral doses of 54 $\mu\text{g}/\text{kg}/\text{day}$ (318 $\mu\text{g}/\text{m}^2/\text{day}$) resulted in a significantly higher incidence of skeletal abnormalities consisting primarily of enlarged fontanelles and extra ribs. The enlarged fontanelles are most likely due to calcipotriene's effect upon calcium metabolism. The maternal and fetal calculated no-effect exposures in the rat (43.2 $\mu\text{g}/\text{m}^2/\text{day}$) and rabbit (17.6 $\mu\text{g}/\text{m}^2/\text{day}$) studies are approximately equal to the expected human systemic exposure

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 12

level (18.5 µg/m²/day) from dermal application. There are no adequate and well-controlled studies in pregnant women. Therefore, Dovonex[®] Cream should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers

There is evidence that maternal 1,25-dihydroxy vitamin D₃ (calcitriol) may enter the fetal circulation, but it is not known whether it is excreted in human milk. The systemic disposition of calcipotriene is expected to be similar to that of the naturally occurring vitamin. Because many drugs are excreted in human milk, caution should be exercised when Dovonex[®] Cream is administered to a nursing woman.

Pediatric Use

Safety and effectiveness of Dovonex[®] Cream in pediatric patients have not been established. Because of a higher ratio of skin surface area to body mass, pediatric patients are at greater risk than adults of systemic adverse effects when they are treated with topical medication.

Geriatric Use

Of the total number of patients in clinical studies of calcipotriene cream, approximately 15% were 65 or older, while approximately 3% were 75 and over. There were no significant differences in adverse events for subjects over 65 years compared to those under 65 years of age. However, the greater sensitivity of older individuals cannot be ruled out.

ADVERSE REACTIONS

In controlled clinical trials, the most frequent adverse experiences reported for Dovonex[®] (calcipotriene cream) Cream, 0.005% were cases of skin irritation, which occurred in approximately 10-15% of patients. Rash, pruritus, dermatitis and worsening of psoriasis were reported in 1 to 10% of patients.

OVERDOSAGE

Topically applied calcipotriene can be absorbed in sufficient amounts to produce systemic effects. Elevated serum calcium has been observed with excessive use of topical calcipotriene. If elevation in serum calcium should occur, discontinue treatment until normal calcium levels are restored. (See **PRECAUTIONS.**)

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 13

DOSAGE AND ADMINISTRATION

Apply a thin layer of Dovonex[®] Cream to the affected skin twice daily and rub in gently and completely. The safety and efficacy of Dovonex[®] Cream have been demonstrated in patients treated for eight weeks.

HOW SUPPLIED

Dovonex[®] (calcipotriene cream) Cream, 0.005% is available in:

60 gram aluminum tubes N 0430-3020-15
120 gram aluminum tubes N 0430-3020-17

STORAGE

Store at controlled room temperature 15° C-25° C (59° F-77° F). Do not freeze.

LEO[®]



Manufactured by LEO Laboratories Ltd.
Dublin, Ireland



Marketed by:
Warner Chilcott (US), Inc.
Rockaway, NJ 07866 USA

U.S. Patent No. 4,866,048

3020G061

Revised XXX 2007

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 14

Dovonex[®]

(calcipotriene ointment),

0.005%

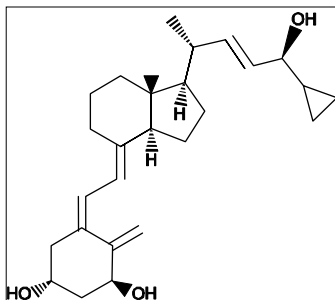
Rx only

FOR TOPICAL DERMATOLOGIC USE ONLY.
Not for Ophthalmic, Oral or Intravaginal Use.

DESCRIPTION

Dovonex[®] (calcipotriene ointment), 0.005% contains the compound calcipotriene, a synthetic vitamin D₃ derivative, for topical dermatological use.

Chemically, calcipotriene is (5Z,7E,22E,24S)-24-cyclopropyl-9,10-secochole-5,7,10(19), 22-tetraene-1 α ,3 β ,24-triol-, with the empirical formula C₂₇H₄₀O₃, a molecular weight of 412.6, and the following structural formula:



Calcipotriene is a white or off-white crystalline substance. Dovonex[®] ointment contains calcipotriene 50 μ g/g in an ointment base of dibasic sodium phosphate, edetate disodium, mineral oil, petrolatum, propylene glycol, tocopherol, steareth-2 and water.

CLINICAL PHARMACOLOGY

In humans, the natural supply of vitamin D depends mainly on exposure to the ultraviolet rays of the sun for conversion of 7-dehydrocholesterol to vitamin D₃ (cholecalciferol) in the skin. Calcipotriene is a synthetic analog of vitamin D₃.

Clinical studies with radiolabelled calcipotriene ointment indicate that approximately 6% (\pm 3%, SD) of the applied dose of calcipotriene is absorbed systemically when the ointment is applied topically to psoriasis plaques or 5% (\pm 2.6%, SD) when applied to normal skin, and much of the absorbed active is converted to inactive metabolites within 24 hours of application.

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 15

Vitamin D and its metabolites are transported in the blood, bound to specific plasma proteins. The active form of the vitamin, 1,25-dihydroxy vitamin D₃ (calcitriol), is known to be recycled via the liver and excreted in the bile. Calcipotriene metabolism following systemic uptake is rapid, and occurs via a similar pathway to the natural hormone. The primary metabolites are much less potent than the parent compound.

There is evidence that maternal 1,25-dihydroxy vitamin D₃ (calcitriol) may enter the fetal circulation, but it is not known whether it is excreted in human milk. The systemic disposition of calcipotriene is expected to be similar to that of the naturally occurring vitamin.

CLINICAL STUDIES

Adequate and well-controlled trials of patients treated with Dovonex[®] ointment have demonstrated improvement usually beginning after two weeks of therapy. This improvement continued in patients using Dovonex[®] once daily and twice daily. After 8 weeks of once daily Dovonex[®], 56.7% of patients showed at least marked improvements (6.4% showed complete clearing). After 8 weeks of twice daily Dovonex[®], 70.0% of patients showed at least marked improvement (11.3% showed complete clearing).

Subtracting percentages of patients using placebo (vehicle only) from percentages of patients using Dovonex[®] who had at least marked improvements after 8 weeks yields 39.9% for once daily and 49.6% for twice daily. This adjustment for placebo effect indicates that what might appear to be differences between once daily and twice daily use may reflect differences in the studies independent from the frequency of dosing. Although there was a numerical difference in comparison across studies, twice daily dosing has not been shown to be superior in efficacy to once daily dosing.

Over 400 patients have been treated in open label clinical studies of Dovonex[®] for periods of up to one year. In half of these studies, patients who previously had not responded well to Dovonex[®] were excluded. The adverse events in these extended studies included skin irritation in approximately 25% of patients and worsening of psoriasis in approximately 10% of patients. In one of these open label studies, half of the patients no longer required Dovonex[®] by 16 weeks of treatment, because of satisfactory therapeutic results.

INDICATIONS AND USAGE

Dovonex[®] (calcipotriene ointment), 0.005%, is indicated for the treatment of plaque psoriasis in adults. The safety and effectiveness of topical calcipotriene in dermatoses other than psoriasis have not been established.

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 16

CONTRAINDICATIONS

Dovonex[®] is contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation. It should not be used by patients with demonstrated hypercalcemia or evidence of vitamin D toxicity. Dovonex[®] should not be used on the face.

PRECAUTIONS

General

Use of Dovonex[®] may cause irritation of lesions and surrounding uninvolved skin. If irritation develops, Dovonex[®] should be discontinued.

For external use only. Keep out of the reach of children. Always wash hands thoroughly after use.

Transient, rapidly reversible elevation of serum calcium has occurred with use of Dovonex[®]. If elevation in serum calcium outside the normal range should occur, discontinue treatment until normal calcium levels are restored.

Information for Patients

Patients using Dovonex[®] should receive the following information and instructions:

9. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the face or eyes. As with any topical medication, patients should wash hands after application.
10. This medication should not be used for any disorder other than that for which it was prescribed.
11. Patients should report to their physician any signs of local adverse reactions.
12. Patients that apply Dovonex[®] to exposed portions of the body should avoid excessive exposure to either natural or artificial sunlight (including tanning booths, sun lamps, etc.).

Carcinogenesis, Mutagenesis, Impairment of Fertility

When calcipotriene was applied topically to mice for up to 24 months at dosages of 3, 10 and 30 µg/kg/day (corresponding to 9, 30 and 90 µg/m²/day), no significant changes in tumor incidence were observed when compared to control. In a study in which albino hairless mice were exposed to both UVR and topically applied calcipotriene, a reduction in the time required for UVR to induce the formation of skin tumors was observed (statistically significant in males only), suggesting that calcipotriene may enhance the effect of UVR to induce skin tumors. Patients that apply Dovonex[®] to exposed portions of the body should avoid excessive exposure to either natural or artificial sunlight (including tanning booths, sun lamps, etc.). Physicians may wish to limit or avoid use of phototherapy in patients that use Dovonex[®].

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009

Page 17

Calcipotriene did not elicit any mutagenic effects in an Ames mutagenicity assay, a mouse lymphoma TK locus assay, a human lymphocyte chromosome aberration assay, or in a micronucleus assay conducted in mice.

Studies in rats at doses up to 54 µg/kg/day (324 µg/m²/day) of calcipotriene indicated no impairment of fertility or general reproductive performance.

Pregnancy

Teratogenic Effects: Pregnancy Category C

Studies of teratogenicity were done by the oral route where bioavailability is expected to be approximately 40-60% of the administered dose. In rabbits, increased maternal and fetal toxicity were noted at a dosage of 12 µg/kg/day (132 µg/m²/day); a dosage of 36 µg/kg/day (396 µg/m²/day) resulted in a significant increase in the incidence of incomplete ossification of the pubic bones and forelimb phalanges of fetuses. In a rat study, a dosage of 54 µg/kg/day (318 µg/m²/day) resulted in a significantly increased incidence of skeletal abnormalities (enlarged fontanelles and extra ribs). The enlarged fontanelles are most likely due to calcipotriene's effect upon calcium metabolism. The estimated maternal and fetal no-effect exposure levels in the rat (43.2 µg/m²/day) and rabbit (17.6 µg/m²/day) studies are approximately equal to the expected human systemic exposure level (18.5 µg/m²/day) from dermal application. There are no adequate and well-controlled studies in pregnant women. Therefore, Dovonex[®] ointment should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers

It is not known whether calcipotriene is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Dovonex[®] (calcipotriene ointment), 0.005% is administered to a nursing woman.

Pediatric Use

Safety and effectiveness of Dovonex[®] in pediatric patients have not been established. Because of a higher ratio of skin surface area to body mass, pediatric patients are at greater risk than adults of systemic adverse effects when they are treated with topical medication.

Geriatric Use

Of the total number of patients in clinical studies of calcipotriene ointment, approximately 12% were 65 or older, while approximately 4% were 75 and over. The results of an analysis of severity of skin-

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 18

related adverse events showed a statistically significant difference for subjects over 65 years (more severe) compared to those under 65 years (less severe).

ADVERSE REACTIONS

In controlled clinical trials, the most frequent adverse reactions reported for Dovonex[®] were burning, itching and skin irritation, which occurred in approximately 10-15% of patients. Erythema, dry skin, peeling, rash, dermatitis, worsening of psoriasis including development of facial/scalp psoriasis were reported in 1 to 10% of patients. Other experiences reported in less than 1% of patients included skin atrophy, hyperpigmentation, hypercalcemia, and folliculitis. Once daily dosing has not been shown to be superior in safety to twice daily dosing.

OVERDOSAGE

Topically applied Dovonex[®] can be absorbed in sufficient amounts to produce systemic effects. Elevated serum calcium has been observed with excessive use of Dovonex[®] ointment.

DOSAGE AND ADMINISTRATION

Apply a thin layer of Dovonex[®] ointment once or twice daily and rub in gently and completely.

HOW SUPPLIED

Dovonex[®] (calcipotriene ointment), 0.005% is available in:

60 gram aluminum tubes N 0430-3010-15.
120 gram aluminum tubes N 0430-3010-17

STORAGE

Store at controlled room temperature 15° C - 25° C (59° F - 77° F). Do not freeze.

LEO[®]



Manufactured by LEO Laboratories Ltd.
Dublin, Ireland



Marketed by:

Warner Chilcott (US), Inc.
Rockaway, NJ 07866 USA

NDA 20-611/S-007, NDA 20-554/S-007, NDA 20-273/S-009
Page 19

U.S. Patent No. 4,866,048

3010G061

Revised XXX 2007