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HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use DAPSONE GEL safely and effectively. See full prescribing information for DAPSONE GEL.

DAPSONE gel, for topical use
Initial U.S. Approval: 1955

INDICATIONS AND USAGE

Dapsone gel is indicated for the topical treatment of acne vulgaris (1).

DOSAGE AND ADMINISTRATION

- Apply twice daily (2).
Apply approximately a pea-sized amount of dapsone gel, 5%, in a thin layer to the acne affected area (2).
If there is no improvement after 12 weeks, treatment with dapsone gel, 5%, should be reassessed (2).
For topical use only. Not for oral, ophthalmic, or intravaginal use (2).

DOSAGE FORMS AND STRENGTHS

Gel, 5% (3).

CONTRAINDICATIONS

None (4).

FULL PRESCRIBING INFORMATION: CONTENTS*

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FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Dapsone Gel, 5%, is indicated for the topical treatment of acne vulgaris.

2 DOSAGE AND ADMINISTRATION

For topical use only. Not for oral, ophthalmic, or intravaginal use.
After the skin is gently washed and patted dry, apply approximately a pea-sized amount of dapsone gel, 5%, in a thin layer to the acne affected areas twice daily. Rub in dapsone gel, 5%, gently and completely.
Dapsone gel, 5%, is gritty with visible drug substance particles. Wash hands after application of dapsone gel, 5%.

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WARNINGS AND PRECAUTIONS

- Methemoglobinemia: Cases of methemoglobinemia have been reported. Discontinue dapsone gel if signs of methemoglobinemia occur (5.1).
Hematologic Effects: Some subjects with G6PD deficiency using dapsone gel developed laboratory changes suggestive of hemolysis (5.2)(8.6).

ADVERSE REACTIONS

Most common adverse reactions (incidence ≥ 10%) are oiliness/peeling, dryness and erythema at the application site (6).

To report SUSPECTED ADVERSE REACTIONS, contact Taro Pharmaceuticals U.S.A., Inc. at 1-866-923-4914 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

- Trimethoprim/sulfamethoxazole (TMP/SMX) increases the level of dapsone and its metabolites (7.1).
Topical benzoyl peroxide used at the same time as dapsone gel may result in temporary local yellow or orange skin discoloration (7.2).

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.

Revised: 06/2018

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* Sections or subsections omitted from the full prescribing information are not listed.

If there is no improvement after 12 weeks, treatment with dapsone gel, 5%, should be reassessed.

3 DOSAGE FORMS AND STRENGTHS

Gel, 5%. Each gram of dapsone gel contains 50 mg of dapsone in a white to pale yellowish gel.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 Methemoglobinemia

Cases of methemoglobinemia, with resultant hospitalization, have been reported postmarketing in



Dapsone Gel, 5%

Dapsone Gel, 5%



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Table 1 – Application Site Adverse Reactions by Maximum Severity

Table with 7 columns: Application Site Event, Dapsone Gel 5% (N=1819) [Mild, Moderate, Severe], Vehicle (N=1660) [Mild, Moderate, Severe]. Rows include Erythema, Dryness, and Oiliness/Peeling.

The adverse reactions occurring in at least 1% of subjects in either arm in the four vehicle controlled trials are presented in Table 2.

Table 2 – Adverse Reactions Occurring in at least 1% of Subjects

Table with 3 columns: Application Site Reaction NOS, Dapsone Gel 5% (N=1819), Vehicle (N=1660). Rows include Application Site Reaction NOS, Dryness, Erythema, Burning, Pruritus, Pyrexia, Nasopharyngitis, etc.

NOS = Not otherwise specified

One subject treated with dapsone gel in the clinical trials had facial swelling which led to discontinuation of medication.

In addition, 486 subjects were evaluated in a 12 month safety trial. The adverse event profile in this trial was consistent with that observed in the vehicle-controlled trials.

6.2 Experience with Oral Use of Dapsone

Although not observed in the clinical trials with dapsone gel (topical dapsone) serious adverse reactions have been reported with oral use of dapsone, including agranulocytosis, hemolytic anemia, peripheral neuropathy (motor loss and muscle weakness), and skin reactions (toxic epidermal necrolysis, erythema multiforme, morbilliform and scarlatiniform reactions, bullous and exfoliative dermatitis, erythema nodosum, and urticaria).

PATIENT INFORMATION
Dapsone
(dap' sone) Gel, 5%

Important: For use on skin only (topical use). Do not use Dapsone Gel, 5% in or on your mouth, eyes, or vagina.

What is Dapsone Gel, 5%?

Dapsone Gel, 5% is a prescription medicine used on your skin (topical) to treat acne vulgaris. Dapsone Gel has not been studied in children under 12 years of age.

Before using Dapsone Gel, 5%, tell your doctor about all of your medical conditions, including if you:

- Have glucose-6-phosphate dehydrogenase deficiency (G6PD)
Have higher than normal levels of methemoglobin in your blood (methemoglobinemia)
Are pregnant or plan to become pregnant. It is not known if Dapsone Gel, 5 % will harm your unborn baby.
Are breastfeeding or plan to breastfeed. Dapsone Gel, 5% can pass into your breast milk and may harm your baby. You and your doctor should decide if you will use Dapsone Gel, 5% or breastfeed. You should not do both.

Tell your doctor about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Especially tell your doctor if you are using acne medicines that contain benzoyl peroxide. Use of benzoyl peroxide with Dapsone Gel, 5% at the same time may cause your skin or facial hair to temporarily turn yellow or orange at the site of application.

How should I use Dapsone Gel, 5%?

- Use Dapsone Gel, 5% exactly as your doctor tells you.
Apply Dapsone Gel, 5% twice a day.
Gently wash and pat dry the areas of your skin where you will apply Dapsone Gel, 5%.
Apply a pea-sized amount of Dapsone Gel, 5% in a thin layer to the areas of your skin that have acne.
Rub Dapsone Gel, 5% in gently and completely. It may feel gritty and you may see particles in the gel.
Make sure to put the cap back on the Dapsone Gel tube. Close it tightly.
Wash your hands after applying Dapsone Gel, 5%.
If your acne does not get better after using Dapsone Gel, 5% for 12 weeks, talk to your doctor about continuing treatment.

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6.3 Postmarketing Experience

Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

7 DRUG INTERACTIONS

7.1 Trimethoprim-Sulfamethoxazole

A drug-drug interaction study evaluated the effect of the use of dapsonse gel, 5%, in combination with double strength (160 mg/800 mg) trimethoprim-sulfamethoxazole (TMP/SMX). During co-administration, systemic levels of TMP and SMX were essentially unchanged.

7.2 Topical Benzoyl Peroxide

Topical application of dapsonse gel followed by benzoyl peroxide in subjects with acne vulgaris resulted in a temporary local yellow or orange discoloration of the skin and facial hair (reported by 7 out of 95 subjects in a clinical study) with resolution in 4 to 57 days.

7.3 Drug Interactions with Oral Dapsonse

Certain concomitant medications (such as rifampin, anticonvulsants, St. John's wort) may increase the formation of dapsonse hydroxylamine, a metabolite of dapsonse associated with hemolysis.

7.4 Concomitant Use with Drugs that Induce Methemoglobinemia

Concomitant use of dapsonse gel with drugs that induce methemoglobinemia such as sulfonamides, acetaminophen, acetanilide, aniline dyes, benzocaine, chloroquine, dapsonse, naphthalene, nitrates and nitrites, nitrofurantoin, nitroglycerin, nitroprusside, pamaquine, para-aminosalicylic acid, phenacetin, phenobarbital, phenytoin, primaquine, and quinidine may increase the risk for developing methemoglobinemia

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

There are no available data on dapsonse gel, 5%, use in pregnant women to inform a drug-associated risk for adverse developmental outcomes. In animal reproduction studies, oral doses of dapsonse administered to pregnant rats and rabbits during organogenesis that resulted in systemic exposures more than 250 times the systemic exposure at the maximum recommended human dose (MRHD) of dapsonse gel, 5%, resulted in embryocidal effects.

Dapsonse was assessed for effects on perinatal/postnatal pup development and postnatal maternal behavior and function in a study in which dapsonse was orally administered to female rats daily beginning on the seventh day of gestation and continuing until the twenty-seventh day postpartum.

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8.2 Lactation

There is no information regarding the presence of topical dapsonse in breastmilk, the effects on the breastfed infant, or the effects on milk production. Orally administered dapsonse appears in human milk and could result in hemolytic anemia and hyperbilirubinemia especially in infants with G6PD deficiency.

8.4 Pediatric Use

Safety and efficacy was evaluated in 1169 children aged 12 to 17 years old treated with dapsonse gel, 5%, in the clinical trials. The adverse event rate for dapsonse gel, 5%, was similar to the vehicle control group.

8.5 Geriatric Use

Clinical trials of dapsonse gel, 5%, did not include sufficient number of subjects aged 65 and over to determine whether they respond differently from younger subjects.

8.6 G6PD Deficiency

Dapsonse gel, 5% and vehicle were evaluated in a randomized, double-blind, cross-over design clinical trial of 64 subjects with G6PD deficiency and acne vulgaris. Subjects were Black (88%), Asian (6%), Hispanic (2%) or of other racial origin (5%).

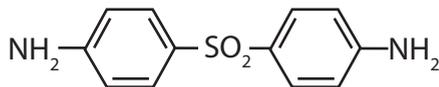
Table 3 – Mean Hemoglobin, Bilirubin, and Reticulocyte Levels in Acne Subjects with G6PD Deficiency in Dapsonse Gel/Vehicle Cross-Over Study

Table with 5 columns: Parameter, Treatment, N, Mean, and Vehicle Mean. Rows include Hemoglobin (g/dL), Bilirubin (mg/dL), and Reticulocytes (%) at Pre-treatment and 2/12 weeks for both Dapsonse Gel and Vehicle.

There were no changes from baseline in haptoglobin or lactate dehydrogenase during dapsonse gel or vehicle treatment at either the 2-week or 12-week time point. The proportion of subjects who experienced decreases in hemoglobin ≥1 g/dL was similar between dapsonse gel, 5% and vehicle treatment.

11 DESCRIPTION

Dapsonse gel, 5%, contains dapsonse, USP, a sulfone, in an aqueous gel base for topical dermatologic use. Dapsonse gel, 5% is a gritty translucent material with visible drug substance particles.



Each gram of dapsonse gel, 5%, contains 50 mg of dapsonse, USP, in a gel of carbomer homopolymer type C, diethylene glycol monoethyl ether, methylparaben, purified water and sodium hydroxide.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

The mechanism of action of dapsonse gel in treating acne vulgaris is not known.

12.3 Pharmacokinetics

An open-label study compared the pharmacokinetics of dapsonse after dapsonse gel, 5%, (110 ± 60 mg/day) was applied twice daily (~BSA 22.5%) for 14 days (n=18) with a single 100 mg dose of oral dapsonse administered to a subgroup of patients (n=10) in a crossover design.

In a long-term safety study of dapsonse gel, 5% treatment, periodic blood samples were collected up to 12 months to determine systemic exposure of dapsonse and its metabolites in approximately 500 patients. Based on the measurable dapsonse concentrations from 408 patients (M=192, F=216), obtained at month 3, neither gender, nor race appeared to affect the pharmacokinetics of dapsonse.

12.4 Microbiology

In Vivo Activity: No microbiology or immunology studies were conducted during dapsonse gel clinical trials. Drug Resistance: No dapsonse resistance studies were conducted during dapsonse gel clinical trials. Because no microbiology studies were done, there are no data available as to whether dapsonse treatment may have resulted in decreased susceptibility of Propionibacterium acnes, an organism associated with acne.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Dapsonse was not carcinogenic to rats when orally administered to females for 92 weeks or males for 100 weeks at dose levels up to 15 mg/kg/day (approximately 231 times the systemic exposure observed in humans as a result of use of the MRHD of dapsonse gel, 5%, based on AUC comparisons).

No evidence of potential to induce carcinogenesis was observed in a dermal study in which dapsonse gel was topically applied to Tg.AC transgenic mice for approximately 26 weeks. Dapsonse concentrations of 3%, 5%, and 10% were evaluated; 3% material was judged to be the maximum tolerated dosage. Dapsonse was negative in a bacterial reverse mutation assay (Ames test), and was negative in a micronucleus assay conducted in mice.

14 CLINICAL STUDIES

Two randomized, double-blind, vehicle-controlled, clinical trials were conducted to evaluate dapsonse gel, 5%, for the treatment of subjects with acne vulgaris (N=1475 and 1525). The trials were designed to enroll subjects 12 years of age and older with 20 to 50 inflammatory and 20 to 100 non-inflammatory lesions at baseline.

The Global Acne Assessment Score was a 5-point scale as follows:

- 0 None: no evidence of facial acne vulgaris
1 Minimal: few non-inflammatory lesions (comedones) are present; a few inflammatory lesions (papules/pustules) may be present
2 Mild: several to many non-inflammatory lesions (comedones) are present; a few inflammatory lesions (papules/pustules) are present

- 3 Moderate: many non-inflammatory (comedones) and inflammatory lesions (papules/pustules) are present; no nodulo-cystic lesions are allowed
4 Severe: significant degree of inflammatory disease; papules/pustules are a predominant feature; a few nodulo-cystic lesions may be present; comedones may be present.

The success rates on the Global Acne Assessment Score (no or minimal acne) at Week 12 are presented in Table 4.

Table 4 - Success (No or Minimal Acne) on the Global Acne Assessment Score at Week 12

Table with 4 columns: Study 1* and Study 2*. Rows include Dapsonse Gel 5% (N=699 vs N=687 for Vehicle) and Subjects with No or Minimal Acne (291 (42%) vs 223 (32%) for Vehicle).

*Analysis excludes subjects classified with minimal acne at baseline

Table 5 presents the mean percent reduction in inflammatory, non-inflammatory, and total lesions from baseline to Week 12.

Table 5 - Percent Reduction in Lesions from Baseline to Week 12

Table with 4 columns: Study 1 and Study 2. Rows include Inflammatory (46% vs 42% for Vehicle), Non-inflammatory (31% vs 24% for Vehicle), and Total (38% vs 32% for Vehicle).

The clinical trials enrolled about equal proportions of male and female subjects. Female subjects tended to have greater percent reductions in lesions and greater success on the Global Acne Assessment Score than males. The breakdown by race in the clinical trials was about 73% Caucasian, 14% Black, 9% Hispanic, and 2% Asian.

16 HOW SUPPLIED/STORAGE AND HANDLING

Dapsonse Gel, 5%, is supplied in the following size tubes: NDC 51672-1387-2 (30 gram laminate tube), NDC 51672-1387-3 (60 gram laminate tube), NDC 51672-1387-8 (90 gram laminate tube). Store at 20° to 25°C (68° to 77°F) [see USP Controlled Room Temperature].

17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information). Hematological Effects: Inform patients that methemoglobinemia can occur with topical dapsonse treatment. Advise patients to seek immediate medical attention if they develop cyanosis. Inform patients who have G6PD deficiency that hemolytic anemia may occur with topical dapsonse treatment.

Manufactured by: Taro Pharmaceuticals Inc., Brampton, Ontario, Canada L6T 1C1 Distributed by: Taro Pharmaceuticals U.S.A., Inc. Hawthorne, NY 10532 Revised: June, 2018 LPK-8223-2 52

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What are the possible side effects of Dapsonse Gel, 5%? Dapsonse Gel, 5% may cause serious side effects, including: Decrease of oxygen in your blood caused by a certain type of abnormal red blood cell (methemoglobinemia). Breakdown of red blood cells (hemolytic anemia). Some people with G6PD deficiency using Dapsonse Gel, 5% have developed mild hemolytic anemia. Stop using Dapsonse Gel, 5% and tell your doctor right away if you get any of the following signs and symptoms: back pain, shortness of breath, tiredness or weakness, dark brown urine or fever, yellow or pale skin.

How should I store Dapsonse Gel, 5%? Store Dapsonse Gel, 5% at room temperature, 68° to 77°F (20° to 25°C). Protect Dapsonse Gel, 5% from freezing. Keep Dapsonse Gel, 5% and all medicines out of the reach of children.

General information about the safe and effective use of Dapsonse Gel, 5%? Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use Dapsonse Gel, 5% for a condition for which it was not prescribed. Do not give Dapsonse Gel, 5% to other people, even if they have the same symptoms that you have. It may harm them. You can ask your pharmacist or doctor for information about Dapsonse Gel, 5% that is written for health professionals.

What are the ingredients in Dapsonse Gel, 5%? Active ingredient: dapsonse, USP. Inactive ingredients: carbomer homopolymer type C, diethylene glycol monomethyl ether, methylparaben, purified water and sodium hydroxide. Manufactured by: Taro Pharmaceuticals Inc., Brampton, Ontario, Canada L6T 1C1 Distributed by: Taro Pharmaceuticals U.S.A., Inc., Hawthorne, NY 10532 For more information, call 1-866-923-4914

This Patient Information has been approved by the U.S. Food and Drug Administration. LPK-8223-2 52 Revised: June, 2018