









**Background** 

Pityriasis alba is a nonspecific dermatitis of unknown etiology that causes erythematous scaly patches. These resolve and leave areas of hypopigmentation that slowly repigment to normal.

Pityriasis alba commonly occurs in children.

# **Pathophysiology**

Pityriasis alba has been regarded as a manifestation of <u>atopic</u> <u>dermatitis</u>. <sup>1, 2</sup> Pityriasis alba is known to occur in nonatopic individuals.

Pityriacitrin
, a substance produced by

Malassezia
yeasts, acts as a natural sunscreen, but much of the hypopigmentation
results from a failure of melanin transfer from melanocytes to keratinocytes.

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# **Frequency**

The frequency of pityriasis alba both in the United States and internationally is unknown.

#### International

A large study in a tropical region in schoolchildren showed that the prevalence of pityriasis alba was 9.9%. Another study in Nepal showed that the prevalence of pityriasis alba within a wide range of dermatoses was 5.2%.

# Mortality/Morbidity

Pityriasis alba is not associated with mortality. Pityriasis alba is usually a self-limited, asymptomatic disease.

#### **Race**

Pityriasis alba can affect persons of any race, but it may be more prominent and cosmetically more troublesome in dark-skinned patients.

#### Sex

Both sexes are equally susceptible to pityriasis alba, but it is thought that males are affected more frequently.  $\frac{6}{2}$ 

# Age

Pityriasis alba occurs predominantly in children aged 3-16 years. 5 but can occur in adults. 7

# Clinical History

- Lesions in pityriasis alba are commonly asymptomatic, although some patients report mild pruritus or a burning sensation.
- Erythema is usually mild and may initially be conspicuous. Minimal serous crusting may even occur at a few points on the surface of some of the pityriasis alba plaques.
- Erythema later subsides completely to leave areas of hypopigmentation with or without fine scaling.
- At the stage when a physician commonly observes pityriasis alba lesions, they show only persistent fine scaling and de pigmentation
- . This commonly induces the patient to seek advice.
- Pityriasis alba may be conspicuous in heavily pigmented skin. In lighter skins, pityriasis alba may become conspicuous after sun tanning.

  Pityriasis

alba is considered a skin disorder of late summer because reports describe that excessive and unprotected sun exposure are strongly related in the development of pityriasis alba.

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- Pityriasis alba is associated with atopic diathesis. Inquire about a patient and family history of eczema, asthma, and/or hayfever.
- The course of pityriasis alba is extremely variable. Most cases persist for several months, and some still show leukoderma for a year or more after all scaling subsides.
  - Recurrent crops of new lesions may develop at intervals.
  - The average duration of the common facial form in childhood is a year or more.
- Widespread cases overlap with a condition termed progressive and extensive hypomelanosis.

  § Progressive and extensive hypomelanosis occurs mainly in women from 18-25 years, with progressive development of round, pale coalescent macules

mainly on the back that are unresponsive to therapy but spontaneously regress within 3-4 years.

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# **Physical**

- The individual pityriasis alba lesion is a rounded, oval, or irregular plaque that is red, pink, or skin colored and has fine lamellar or branny scaling with indistinct margins.
  - Several patches are usually observed.
- In children, pityriasis alba lesions are often confined to the face and are most common around the mouth, chin, and cheeks (see <a href="Media File 1">Media File 1</a>). Legs and trunk are less commonly involved.
  - In 20% of affected children, the neck, arms, and face are involved.
- Less commonly, the face is spared and scattered pityriasis alba lesions are observed on the trunk and limbs.
- Pityriasis alba lesions usually range from 0.5-2 cm in diameter but may be larger, especially on the trunk.
- Two uncommon variants exist, a pigmenting variety and an extensive type. In pigmenting pityriasis

alba, the typical lesion is a central zone of bluish

hyperpigmentation

surrounded by a

hypopigmented

, slightly scaly halo of variable width, usually confined to the face and often associated with dermatophyte

infection.

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Extensive

pityriasis

alba is differentiated from the classic form by the widespread and symmetrical involvement of the skin, no preceding inflammatory phase, a higher female-to-male ratio, and, histologically

, the absence of spongiosis.

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#### Causes

- The cause is unknown. The condition has been regarded as a manifestation of <u>atopic</u> dermatitis

or other mild forms of eczema.

Reported contributory factors related to the development of pityriasis alba are excessive and unprotected sun exposure, poor hygienic habits, and environmental influences such as

temperature, humidity, and altitude

# Treatment Medical Care

Pityriasis alba resolves spontaneously and may not require treatment.

- Treatment includes a simple emollient cream.
- For chronic lesions on the trunk, a mild tar paste may be helpful.
- Topical 1% hydrocortisone preparations may be helpful if mild inflammation is present. 15
- Topical 0.1% tacrolimus ointment may be indicated only after other treatment options have failed.

### **Consultations**

A dermatologist may be consulted for cosmetic camouflage.

### **Diet**

No dietary recommendations are currently proposed.

## **Activity**

No specific activity limitations or exercises are recommended. Photoprotection may be considered. Also see

Sunscreens and Photoprotection

## Medication

Response to treatment for pityriasis alba often is disappointing.

#### **Emollients**

A variety of lotions, creams, and ointments that contain hydrocarbons, oil, waxes, and

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long-chain fatty acids aid in retaining moisture in the skin especially if applied immediately after bathing. A bland emollient may be used to reduce the scaling.

## Aqueous cream (Curel, Cetaphil, Nivea, Lubriderm)

Oil in water emulsion that spreads easily and helps retain moisture in the skin.

- Dosing
- Interactions
- Contraindications
- Precautions

#### Adult

Apply 2-6 times/d

**Pediatric** 

Administer as in adults

- Dosing
- Interactions
- Contraindications
- Precautions

#### None reported

- Dosing
- Interactions
- Contraindications
- Precautions

## Documented hypersensitivity

- Dosing
- Interactions
- Contraindications
- Precautions

#### **Pregnancy**

A - Fetal risk not revealed in controlled studies in humans

#### **Precautions**

None reported

# Corticosteroids, topical

Reducing inflammation helps reduce symptoms and helps resolve lesions.

#### **Hydrocortisone (Cortaid, Dermacort)**

1% or 2.5% hydrocortisone cream or ointment. Adrenocorticosteroid derivative suitable for application to skin or external mucous membranes. Has mineralocorticoid and glucocorticoid effects resulting in anti-inflammatory activity.

- Dosing
- Interactions
- Contraindications
- Precautions

#### Adult

## Apply to face bid for 1 wk or until lesion improves

#### **Pediatric**

## Apply as in adults

- Dosing
- Interactions
- Contraindications
- Precautions

#### None reported

- Dosing
- Interactions
- Contraindications
- Precautions

Documented hypersensitivity; viral, fungal, and bacterial skin infections

- Dosing
- Interactions
- Contraindications
- Precautions

#### **Pregnancy**

C - Fetal risk revealed in studies in animals but not established or not studied in humans; may use if benefits outweigh risk to fetus

#### **Precautions**

Prolonged use, applying over large surface areas, application of potent steroids, and occlusive dressings may increase systemic absorption of corticosteroids and may cause Cushing syndrome, reversible HPA axis suppression, hyperglycemia, and glycosuria

## **Immunosuppressant Agent**

## **Tacrolimus (Protopic)**

Mechanism of action in atopic dermatitis not known. Reduces itching and inflammation by suppressing the release of cytokines from T cells. Also inhibits transcription for genes that encode IL-3, IL-4, IL-5, GM-CSF, and TNF-alpha, all of which are involved in early stages of T-cell activation. Additionally, may inhibit release of preformed mediators from skin mast cells and basophils and down-regulate expression of FCeRI on Langer hans

cells. Can be used in patients as young as 2 y. Drugs of this class are more expensive than topical corticosteroids. Available as ointment in concentrations of 0.03 and 0.1%. Indicated only after other treatment options have failed.

- Dosing
- Interactions
- Contraindications
- Precautions

#### Adult

Apply thin layer to affected skin areas bid and rub in gently and completely; continue treatment for 1 wk after clearing of signs and symptoms

Short-term and intermittent use only

#### **Pediatric**

<2 years: Not recommended

2-15 years: Apply 0.03% ointment bid to affected area(s)

>15 years: Administer as adults Short-term and intermittent use only

- Dosing
- Interactions
- Contraindications
- Precautions

## None reported

- Dosing
- Interactions
- Contraindications
- Precautions

Documented hypersensitivity to tacrolimus or components of ointment

- Dosing
- Interactions
- Contraindications
- Precautions

#### **Pregnancy**

C - Fetal risk revealed in studies in animals but not established or not studied in humans; may use if benefits outweigh risk to fetus

#### **Precautions**

Patients may experience a burning sensation during first few days of application; skin can become photosensitive and patients should be cautioned about exposure to direct or artificial sunlight and to use sunscreen; safety and efficacy in infected atopic dermatitis is not known; application under occlusion, which may promote systemic exposure, has not been evaluated (do not use ointment with occlusive dressings); absorption following topical applications of ointment is minimal (relative to systemic administration), but is excreted in human milk and, thus, a decision should be made whether to discontinue nursing or to discontinue drug, taking into account importance of drug to mother (potential for serious adverse reactions in nursing infants from

should also be a concern); caution with conditions that suppress the immune system (

, AIDS, cancer); possible risk of lymph node or skin cancer based on animal studies and a small number of patients; may increase risk of viral infections; other adverse effects include headache, sore throat,

flulike

symptoms, fever, and cough