This report reflects the best data available at the time the report was prepared, but caution should be exercised in interpreting the data; the results of future studies may require alteration of the conclusions or recommendations set forth in this report.

Guidelines of care for superficial mycotic infections of the skin: Pityriasis (tinea) versicolor

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I. Introduction
The American Academy of Dermatology’s Guidelines/Outcomes Committee is developing guidelines of care for our profession. The development of guidelines will promote the continued delivery of quality care and assist those outside our profession in understanding the complexities and scope of care provided by dermatologists. For the benefit of members of the American Academy of Dermatology who practice outside the jurisdiction of the United States, the listed treatments may include agents that are not currently approved by the U.S. Food and Drug Administration.

II. Definition
“Guidelines of Care for Superficial Mycotic Infections of the Skin: Pityriasis (Tinea) Versicolor” is one of six documents addressing superficial mycoses. Companion documents in this series include the following:
Guidelines of Care for Superficial Mycotic Infections of the Skin: Mucocutaneous Candidiasis
Guidelines of Care for Superficial Mycotic Infections of the Skin: Tinea Corporis, Tinea Cruris, Tinea Faciei, Tinea Manuum, and Tinea Pedis
Guidelines of Care for Superficial Mycotic Infections of the Skin: Tinea Capitis and Tinea Barbarae

Guidelines of Care for Superficial Mycotic Infections of the Skin: Onychomycosis
Guidelines of Care for Superficial Mycotic Infections of the Skin: Piedra

Pityriasis (tinea) versicolor is a superficial infection of the stratum corneum by the yeast Malassezia furfur (syn. Pityrosporum orbiculare). This yeast is part of the normal cutaneous flora. Pityriasis (tinea) versicolor is characterized by hyperpigmented and hypopigmented scaly patches, primarily on the trunk and proximal extremities.

III. Rationale
A. Scope
Pityriasis (tinea) versicolor is a common disorder that affects people of all age groups, but is most commonly seen in adults. Infants and children can also be affected, but often have an atypical presentation. This disease is typically worse in geographic areas with tropical ambient temperatures. Multiple factors are known to contribute to its pathogenesis.

B. Issue
Involvement of the cutaneous surface can occasionally be extensive, leading to emotional distress because of appearance. Symptoms vary from none to severe pruritus. Although numerous therapies are available, recurrences frequently occur after treatment, especially in tropical climates.

IV. Diagnostic criteria
A. Clinical
1. History may include the following:
   a. General medical condition, especially if
use of oral antifungals is considered, may include the following:

1) Hepatic disease
2) Renal disease
3) Endocrine disease—diabetes mellitus
4) Use of systemic medications
5) Other

b. Duration, progression to point of maximal severity
c. Seasonal variation
d. Current treatment(s), topical and systemic, of
   1) Pityriasis versicolor
   2) Other diseases
e. Past treatment(s), topical and systemic, of
   1) Pityriasis versicolor
   2) Other diseases
f. Other skin disorders, especially but not limited to the following:
   1) Atopy, personal or familial (because of occasional irritation to topical antifungal agents)
   2) Seborrheic dermatitis
g. Drug allergies
h. Habitual use of heavy oils on skin
i. Other

2. Physical examination may include the following:
   a. General physical examination as indicated
   b. Location
      1) Anterior aspect of the chest
      2) Back
     3) Extremities
     4) Face, neck (more common in children)
   c. Clinical appearance
      1) Hyperpigmented lesions
      2) Hypopigmented lesions
      3) Erythematous lesions
d. Extent of involvement
e. Gradation
     1) Mild
     2) Moderate
     3) Severe
f. Associated findings
    1) Postinflammatory hyperpigmentation and hypopigmentation
    2) Pruritus
    3) Excoriations
    4) Other
g. Other

B. Diagnostic tests
   After review of the patient history and physical examination, the diagnosis can often be established. Greater diagnostic accuracy occurs if the clinical diagnosis is verified by laboratory tests. This verification is especially important when the use of systemic therapy is anticipated. Simple, inexpensive tests that can be performed in the physician’s office at the time of the patient visit may yield immediate results. Such tests include, but are not limited to, the following:

1. Potassium hydroxide preparation (KOH)
   Scale from the affected area is placed on a glass slide, and 10% to 15% KOH is added with or without dimethyl sulfoxide (DMSO). If DMSO is included, gentle heating is generally not necessary. A fungal stain such as Chlorazol Black E, or Parker’s blue-black ink may be added to highlight the hyphae and yeast cells. A confirmatory KOH preparation would reveal short, stubby hyphae and yeast cells. Patients may have a predominance of either.

2. Wood’s light examination to demonstrate extent of involvement

3. Other stains
   Other stains may be used to identify the hyphae and yeast cells. These stains include, but are not limited to, the following:
   a. Paragon multiple stain
   b. Other

4. Studies for differential diagnosis may include the following:
   a. Fungal culture to exclude other mycoses M. furfur does not grow on routine agars without growth supplements and is therefore not routinely cultured.
   b. Skin biopsy to differentiate pityriasis versicolor from other dermatoses
   c. Other

5. Other

C. Inappropriate diagnostic tests
   Routine allergy testing

D. Exceptions
   Not applicable

E. Evolving diagnostic tests
   Not applicable

V. Recommendations

A. Treatment
   Topical treatment alone may be indicated for most patients. Systemic treatment may be indicated for persons with extensive involvement, with recurrent infections, and in whom topical agents as sole therapy have failed. Systemic therapy may be used with or without topical agents or may be used alone in patients intolerant to topical treatment.
1. Medical
   a. Topical antifungal products include, but are not limited to, the following:
      1) Imidazoles
      2) Ciclopirox olamine
      3) Miscellaneous
         a) Selenium sulfide shampoos, lotions
         b) Zinc pyrithione shampoos
         c) Sulfur preparations
         d) Salicylic acid preparations
         e) Propylene glycol lotions
         f) Benzoyl peroxide
         g) Other
      4) Other
   b. Systemic therapy (see V.A. above)
      1) Ketoconazole
      2) Evolving
         a) Fluconazole
         b) Itraconazole
         c) Other
      3) Other
2. Surgical
   Not applicable
3. Other
B. Miscellaneous
1. Follow-up
   Follow-up examinations may be indicated, depending on extent, severity, and tolerance to medications, as well as the need to augment or alternate treatment on the basis of clinical response. Intervals between visits will vary, depending on, but not limited to, the severity of the problem and the intensity of the treatment.
2. Monitoring of patients receiving systemic therapy
   Periodic monitoring of hepatic, renal, and hematopoietic function may be indicated in patients treated with systemic antifungals.
3. Drug interactions
   Oral antifungals have the potential for significant drug interactions and toxicities. The package insert and the Physician's Desk Reference (PDR) should be consulted.
4. Contraindications and precautions for use of systemic antifungal therapy
   a. Hypersensitivity to medication
   b. Precautions (see package insert and the PDR)
   c. Other
VI. Supporting evidence
   See Bibliography (Appendix)
VII. Disclaimer
   Adherence to these guidelines will not ensure successful treatment in every situation. Further, these guidelines should not be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgement regarding the propriety of any specific procedure must be made by the physician in light of all the circumstances presented by the individual patient. For the benefit of members of the American Academy of Dermatology who practice outside the jurisdiction of the United States, the listed treatments may include agents that are not currently approved by the U.S. Food and Drug Administration.

Appendix. Bibliography