Tinea corporis (ringworm)

Background
Superficial dermatophyte infection with either inflammatory or noninflammatory lesions
- Affects all skin regions except scalp, palms, soles, and groin
- Most common causes in the United States are infections with *Trichophyton rubrum*, *T* *tonsurans*, *T* *mentagrophytes*, and *Microsporum canis*

Pathophysiology
- Dermatophytes inhabit cornified layers of skin, hair, and nails
  - Depth usually limited to epidermis
- Common in both males and females
  - Prevalence highest in preadolescents
  - >4 million visits annually for dermatophytoses
- Risk factors
  - Warm, moist environments (public showers, swimming pools)
  - Sharing of towels, clothing, toiletries
  - Skin-to-skin contact

Diagnostics
1. History
   - Pruritic, painful, or burning skin lesions, erythema, scaling, or can be asymptomatic
2. Physical examination
   - Classic lesion: annular patch or plaque with advancing, raised, scaling border and central clearing
   - Lesion border may contain pustules or follicular papules
   - Postinflammatory hypo- or hyperpigmentation can occur
3. Microscopy
   - Potassium hydroxide (KOH) microscopy essential for office-based diagnosis
     - Scrape active border of lesion onto slide
     - Add drop of 10% to 20% KOH solution
     - Gently heat
     - Examine under microscope for hyphae

Therapeutics
1. Initial treatment
   - Use azoles (eg, clotrimazole) or allylamines (eg, terbinafine)
   - Apply topical antifungal agent to lesion and 2-cm area surrounding lesion once or twice daily
     - 1–2× daily for 14–21 days for pediatric patients
   - Topical antifungals 1–2 weeks after lesion disappears
   - Allylamine medications maintain cure longer than azoles
   - In pediatric patients, clotrimazole, terbinafine, ketoconazole, and miconazole equally effective
   - Combination antifungal/corticosteroid preparations not recommended
2. Systemic therapy if extensive skin infection, immunosuppression, and/or resistance to topical therapy
   - Fluconazole 150 mg once weekly for 2–4 weeks
   - Itraconazole 100 mg once daily for 2 weeks, or 200 mg daily for 1 week
   - Terbinafine 250 mg once daily for 1–2 weeks

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