The Imaging Spectrum of Pediatric Coccidioidomycosis
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Purpose:
Coccidioidomycosis is endemic in the southwestern United States as well as regions of Mexico, Central America, and South America. Although infection may be asymptomatic in approximately 60% of cases, more severely related fungi may also present with a broad spectrum of clinical and imaging findings in the pediatric population.

Several cases of Coccidioidomycosis: Valley Fever/San Juaquin Fever: have been selected to illustrate the diverse range of imaging presentations of the disease in the chest, the musculoskeletal system, and the CNS in the pediatric population.

Endemic Areas:
South Texas
Arizona
New Mexico
California
Mexico
Argentina
Brazil
Paraguay
Bolivia

Risk Factors:
Not transmitted from person to person
Risk of infection highest in dry, arid months
Second period of risk in late fall terminating with winter rains
Dust exposure is critical factor for infection
Individuals who dig in soil or are exposed to disrupted earth at greatest risk

Life Cycle:
Mycelia (Growth form in the soil. Composed of hyphae and reproductive spores)
Endospores (3-5 microns)
Arthrospores (3-5 microns)
Endospore can start the development of a new spherule repeating its growth phase and
infect new tissue

Clinical Presentations:
Acute Symptomatic Disease:
Pulmonary syndrome (7-21 days following exposure): >50% of symptomatic patients develop flu-like syndromes and recover with no therapy
Diffuse pneumonia
Bacterial pneumonia
Fungal pneumonia
Miliary disease
Disseminated disease
Cutaneous/Soft Tissue Disease:
Acute skin disease
Chronic skin disease
Mycotic cutaneous infections
Cutaneous fungal infections
Mycotic infections of the skin
Primary Pulmonary Disease:
Consolidation
Hilar adenopathy
Mediastinal adenopathy
Other disease presentations
Cutaneous/Soft Tissue Disease:
Acute skin disease
Chronic skin disease
Other disease presentations

References:
Coccidioides spp.: www.dcmf.org 2007

Therapy:
Antifungals for disseminated disease or in immunosuppressed patients
Amphotericin B
Azoles (Fluconozole, Itraconozole, Ketoconozole, etc.)
Lifelong Fluconozole for meningeal infections
Long-duration intrathecal Amphotericin B for meningeal infections

Central Nervous System Disease:
Nodules and Pleural Effusion
Cavitary Lesion
Pericardial Effusions
Thyroid Nodule

Abdominal Disease:
Liver
Stomach
Adrenal glands
Peritoneum

Other Disease Presentations:
Musculoskeletal Disease:
Acute skin disease
Chronic skin disease
Other disease presentations

Therapy:
Antifungals for disseminated disease or in immunosuppressed patients
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Azoles (Fluconozole, Itraconozole, Ketoconozole, etc.)
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