Banner Clinical Practice for Management of Valley Fever
For
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Has no conflicts of interest to disclose
What Is Valley Fever?

• Caused by soil fungi
  *Coccidioides immitis*
  *Coccidioides posadasii*

• Other names:
  – Coccidioidomycosis
  – “COCCI”

• Inhalation of one spore causes infection

• Spectrum of disease
  – Sub-Clinical: 60%
  – Self-Limited: 30%
  – Complicated: 10%

• After infection, most persons develop life-long immunity to a second infection
Delay of Outpatient VF Diagnosis

BUMC-P
45% of Diagnoses Delayed > 1 month

Ginn et al. EID, 2019
Delay of Outpatient VF Diagnosis

BUMC-T
43% of Diagnoses Delayed > 1 month

Donovan et al. EID, 2019
Valley Fever
(Coccidioidomycosis)

A Training Manual for Primary Care Professionals

Prepared by

THE UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE TUCSON
Valley Fever Center for Excellence
Primary Care of Coccidioidomycosis

- **Consider** the diagnosis
- **Order** the right tests
- **Check** for risk factors
- **Check** for complications
- **Initiate** management
Consider the diagnosis in Arizona

- In Arizona, Valley Fever is very common. It should be in the differential often.
- More frequent between the monsoons and the winter rains.
- Syndromes:
  - Always in community acquired pneumonia.
  - Rheumatism.
  - Rashes.
Order the Right Tests:
EIA screen for Coccidioidal Antibodies

Enzyme Immunoassay (EIA) test

– A positive test is very specific and usually is diagnostic.

– A negative test never rules out Valley Fever. Repeated testing improves diagnostic sensitivity.
Check for Risk Factors

Pulmonary Complications
- Diabetes mellitus
- Cardio-pulmonary or other co-morbidities (Evidence: “common sense”).

Disseminated Infection
- Major and critical
  - Cell immunodeficiency
  - Pregnancy
- Minor and small effect
  - Males > Females
  - Racial background
  - Adults > Children
Check for Complications

- Most complications are focal
- A review of systems and physical examination will usually detect or exclude the possibility of complications.
- New focal findings warrant either evaluation or referral for Infectious Diseases or Pulmonary consultation.
Widely Disseminated Coccidioidomycosis
Disseminated Coccidioidomycosis
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Disseminated Coccidioidomycosis
Primary Care of Coccidioidomycosis

1. Consider the diagnosis
2. Order Cocci Serologies
   - Retest
   - If positive, initiate management
   - If negative, check for Risk Factors
3. Check for Risk Factors
   - Specialty Referral
   - If negative, check for complications
4. Check for complications
   - Initiate management
Management
Low Risk, Simple Early Infection

- Follow-up office visits
- Serial body weights
- Check for new symptoms or signs
- Repeat coccidioidal antibody testing
- Repeat Chest PA and Lateral X-rays
- Most patients do not need therapy
2016 Infectious Diseases Society of America (IDSA) Clinical Practice Guideline for the Treatment of Coccidioidomycosis

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“It should be emphasized that no randomized trials exist to assess whether antifungal treatment either shortens the illness of early uncomplicated coccidioidal infections or prevents later complications.”
Median days to $\geq 50\%$ decline in total clinical score

P = 0.899

Ampel et al. CID 2009
Outcome of Subjects
(> 1 month follow-up)

- 50 not treated
  - Median follow-up: 3.1 years
  - All without complications
- 51 treated
  - Median follow-up: 2.9 years
  - 38 off-therapy and without complications
  - 5 remained on treatment
  - 8 had relapses
    - 5 with pulmonary disease
    - 3 with extrapulmonary dissemination
    - Relapses occurred up to 2 years after stopping treatment

Ampel et al. CID 2009
Summary

• Banner Health and the UA Valley Fever Center for Excellence are changing the way Arizona clinicians recognize and manages patients with Valley Fever.

• Central to this change will be the expanded roll of primary care clinicians in earlier diagnosis and management of uncomplicated Valley Fever.
New Banner Clinical Practice for Management of Valley Fever

Thank-You

For more information:
http://vfce.arizona.edu/toolkit