Recognition, Evaluation and Management of Coccidioidomycosis (Valley Fever)

Just Remember C-O-C-C-I

**RECOGNITION**

1. **Consider the diagnosis**
   - Respiratory: Previous visit, needs X-ray or antibacterial Rx?
   - Musc/Skel: More than one week, associated with fever or fatigue.
   - Rashes: *E. nodosum* or *E. multiforme*

Clinician reviews chief complaint(s) and medical history, examines patient, and documents findings (HPI, ROS, PE)

1. **Syndrome:**
   - Respiratory? musculoskeletal? rashes?
   
   No

   Yes

   Valley Fever Process Completed

2. **Endemic Exposure?**
   - residence or recent travel
   
   No

   Yes

   Add Valley Fever to the Differential

   Go to:

   2. **Order the right tests**
Order the right tests
EIA screen for coccidioidal antibodies with reflex to immunodiffusion and quantitative CF.

Check for Risk Factors
Immunosuppression (HIV, organ recipient, Rheum/Gi/Derm response modifier Rx, renal failure)
Diabetes, major cardiac or pulmonary comorbidities, pregnancy

Check for complications evident by physical exam or imaging
Focal ulceration or skin/soft tissue inflammation.
Asymmetric skeletal pain, joint effusions.
Progressive or unusual headache.

EVALUATION

Risk factors present?
No
Yes
Go to: Management, Uncomplicated infect.

Complications present?
No
Yes
Go to: Complicated VF: Refer to Specialist (ID or Pulmonary)

Process Completed
Illness resolved in 3 weeks
Valley Fever

Check for risks and complications

Test Negative
Test Positive

Go to: Risk factors present?
No
Yes

RECOGNITION continued

2 Order the right tests
EIA screen for coccidioidal antibodies with reflex to immunodiffusion and quantitative CF.
Initiate Management, Uncomplicated VF

Approximate Timeline for Management (6-12 months from diagnosis)

Serologic newly diagnosed Valley Fever
- Risk factors Complications?
  - No
    - Schedule follow-up visit #1 2-5 weeks
  - Yes
    - Refer to Specialist (ID or Pulmonary)

Follow-up visit #1
- Interval hx Review of Syst Phys. Exam
- New Complication?
  - No
    - Repeat PA and lat. Chest X-ray (if previous was abnormal)
    - Schedule follow-up visit #2 2-3 months
  - Yes
    - Refer to Specialist (ID or Pulmonary)

Follow-up visit #2
- Interval hx Review of Syst Phys. Exam
- New Complication?
  - No
    - Repeat cocci CF antibody test, ESR and/or C-reactive protein
    - Schedule follow-up visit #3 3-8 months
  - Yes
    - Refer to Specialist (ID or Pulmonary)

Follow-up visit #3
- Interval hx Review of Syst Phys. Exam
- New Complication?
  - No
    - Repeat PA and lat. Chest X-ray (check for residual nodule)
  - Yes
    - Valley Fever an inactive problem
Health education for the patient and family:
General review of what is Valley fever: How you get it, typical symptoms, overall prognosis, need for follow-up
Patient leaflets

Purpose of follow-up visits:
Monitor resolution of weight loss, fever, night-sweats, respiratory signs and symptoms, rashes and musculoskeletal complaints.
Repeat ESR and/or C-reactive protein until normalized.
Look for new signs or symptoms of focal inflammation suggestive of developing dissemination (uncommon but very serious).
Repeat serology and chest X-rays

Antifungal Therapy:
Highly individualized because of the lack of clinical studies. See Tutorial booklet for a discussion
If used, typically fluconazole 400 mg/day for 3-6 months.

Residual fatigue syndrome:
Very common, often for many weeks or even many months but eventually self-resolving. Recent evidence suggest it is due to an oxygen-utilization deficit, measured as a reduced VO2 peak during cardio-pulmonary exercise testing (CPET).
Management
Explain that this is common and not a symptom of a progressive destructive process
Treat with reconditioning plan, possibly with referral to physical therapy