Strategies for Managing Early Coccidioidal Infections: How Much is Enough?

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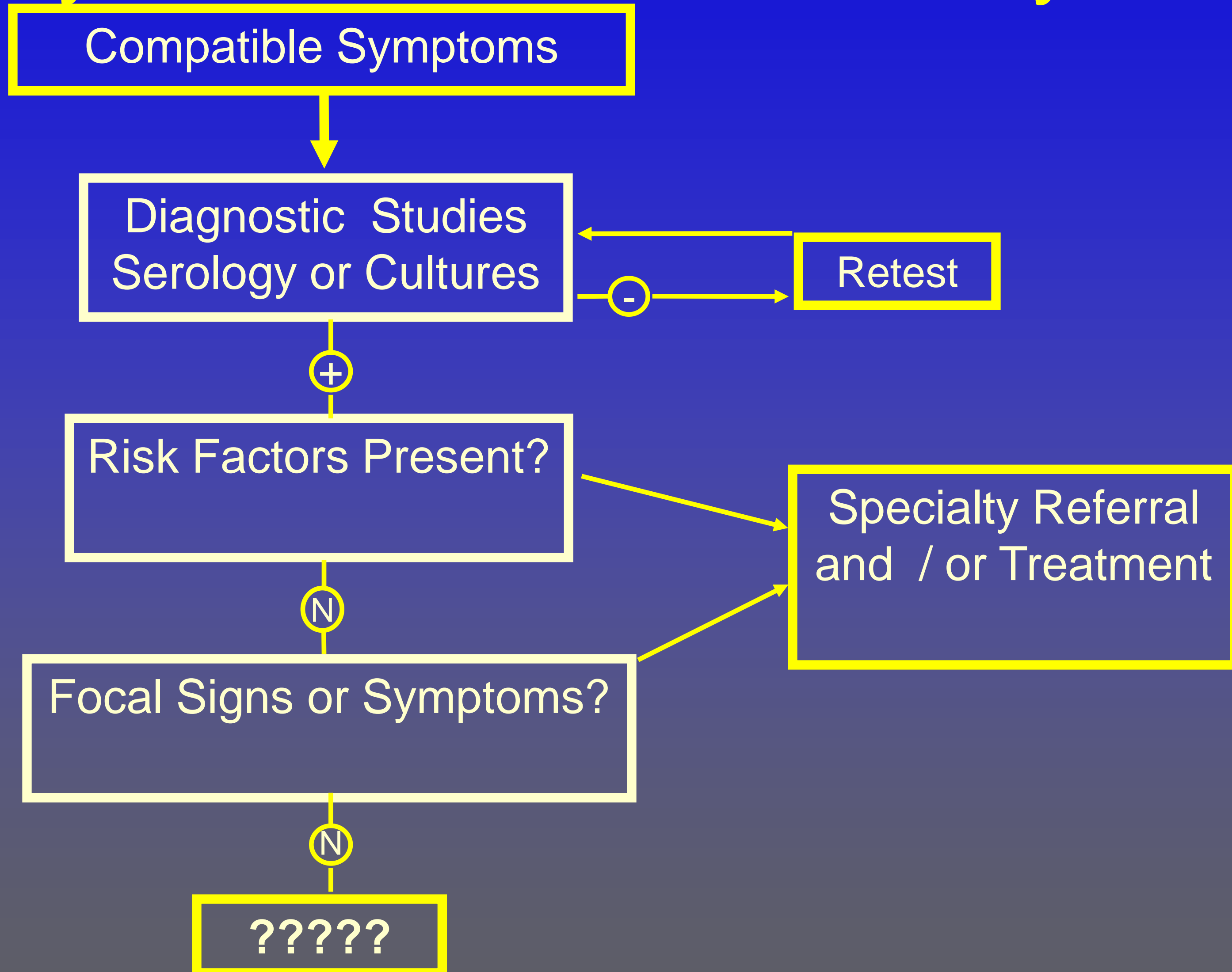
Valley Fever Center for Excellence

Primary Care of Coccidioidomycosis



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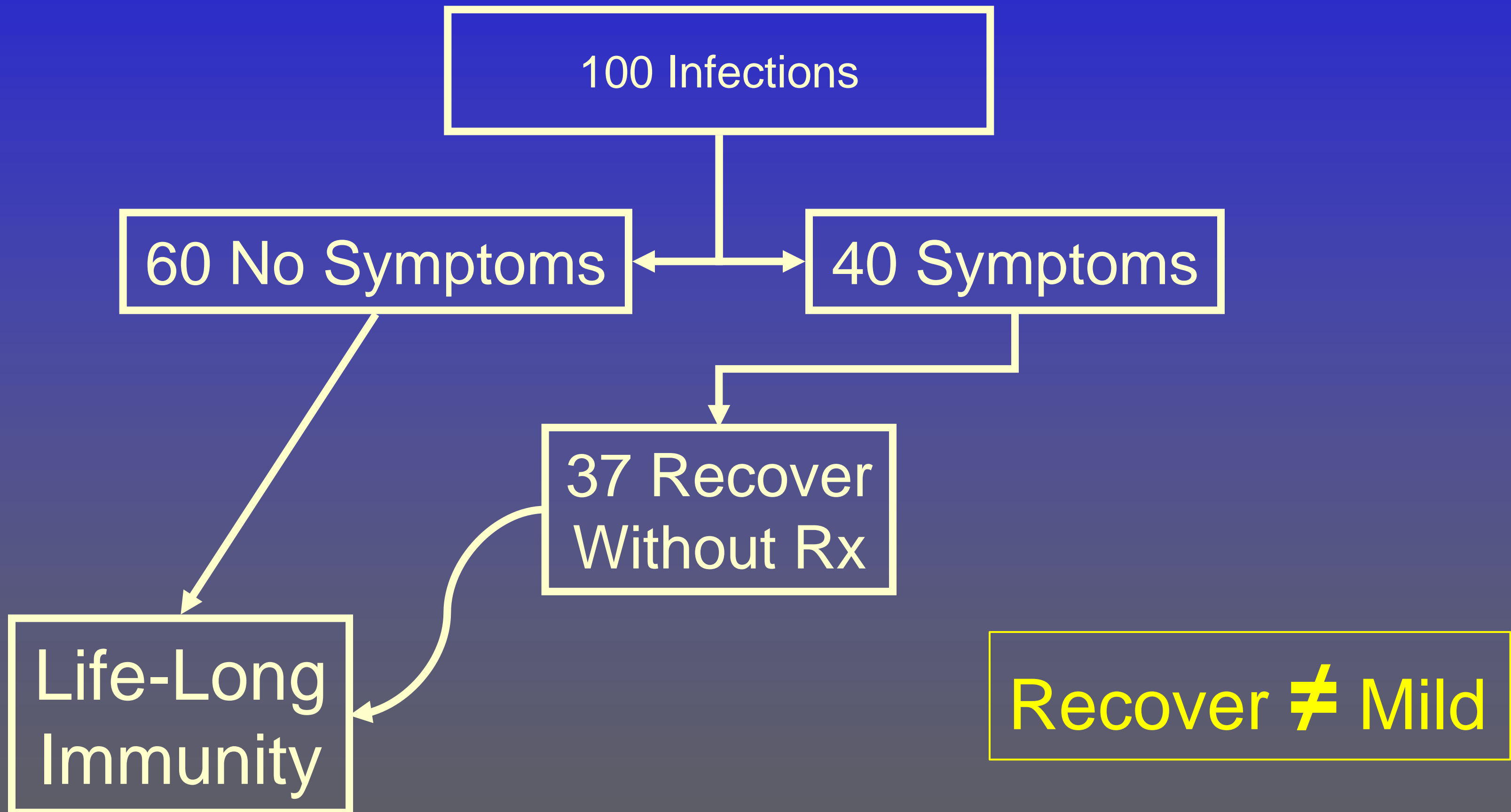
Coccidioidomycosis Spectrum of Disease



Common “Mild” Valley Fever

- Manifestations:
  - Cough, chest pain, fever, weight loss
  - Bone and joint pains (a.k.a. Desert Rheumatism)
  - Skin rashes (painful or intense itching)
  - Fatigue
- Course of illness:
  - Weeks to months
  - 1 of 4 college students are sick for > 4 months
  - 4-fold more drop a semester for Valley Fever than for Mononucleosis

Management
Low Risk, Simple Early Infection

- Continued office visits
- Check for new symptoms or signs
- Serial body weights
- Repeat X-rays
- Repeat coccidioidal antibody testing
- Most patients recover without antifungal drugs

How much is Enough?

- Management of common symptoms
  - Headaches
  - Bone and joint pains
  - Fatigue
- Radiographic monitoring of pneumonia
- Antifungal drugs for uncomplicated VF

Headaches

- Coccidioidal meningitis:
  - Headache most common symptom
- Coccidioidal pneumonia:
  - Headache reported in 20%

- Who gets a lumbar puncture?
  - All?
  - Some?

Bone and joint pains

- “Desert Rheumatism”
  - Usually symmetrical
  - Ankles and knees most common
  - Joint effusions are rare
  - Pathogenesis is “immunologic”
- Best approach to evaluate for dissemination
  - Plain films?
  - Radionuclide scan?
  - CT?
  - MRI?

Fatigue: Typical Problem

- Primary coccidioidal pneumonia diagnosed serologically in an otherwise healthy active person
- Over several weeks, weight returns to normal, fever resolves and pulmonary symptoms gone. ESR becomes normal. CF low or neg.
- However, patient complains of profound inability to carry out normal activities.
- How should this be managed?

Potential Causes of Fatigue

- Circulating cytokines or altered cell receptors?
- Physical deconditioning because of decreased activity.
- Lack of experience by the patient with subacute or chronic disability.
- Patient with excessive expectations of own performance.

Management Strategies

- **Exclude objective evidence of tissue destruction or focal lesions.**
- **Patient Education**
  - Prolonged fatigue common and resolves
  - No evidence of permanent damage
  - Deconditioning and unrealistic expectations
- **Patient Actions**
  - Keep a journal
  - Get a trainer
- **Avoid starting antifungal drugs**

Radiographic monitoring

Typical findings

- Unilateral infiltrate
- Hilar adenopathy
- Pleural effusion (~10%)
- “Normal Chest X-ray” in a third of seropositive patients

Role of CT scans

- If the Chest X-ray is abnormal?
  - Always/Never
- If the chest X-ray is “normal.”
  - Always/Never
- In follow-up
  - Always
  - Only if X-ray was “normal.”
  - Only to help a surgeon

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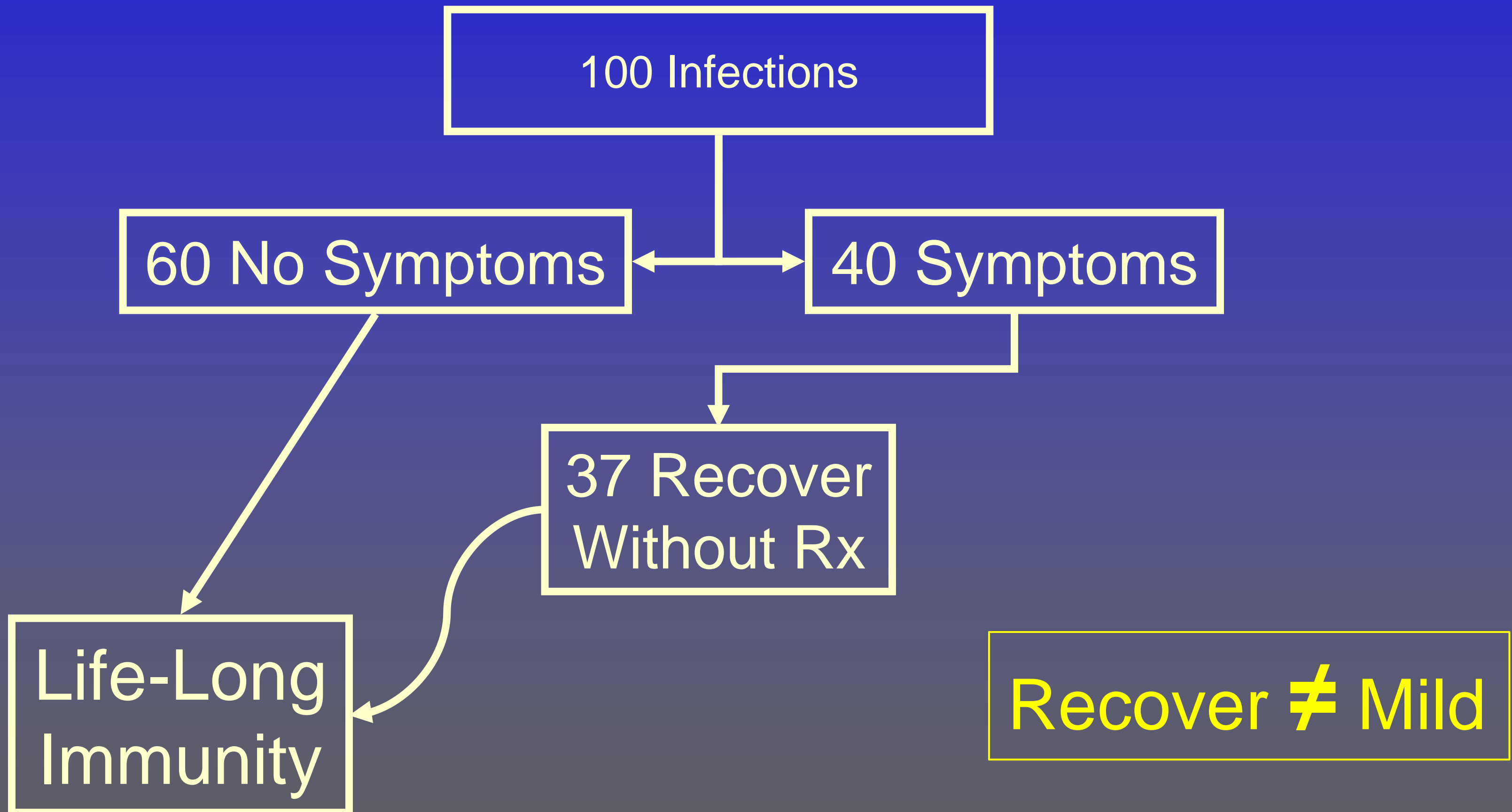
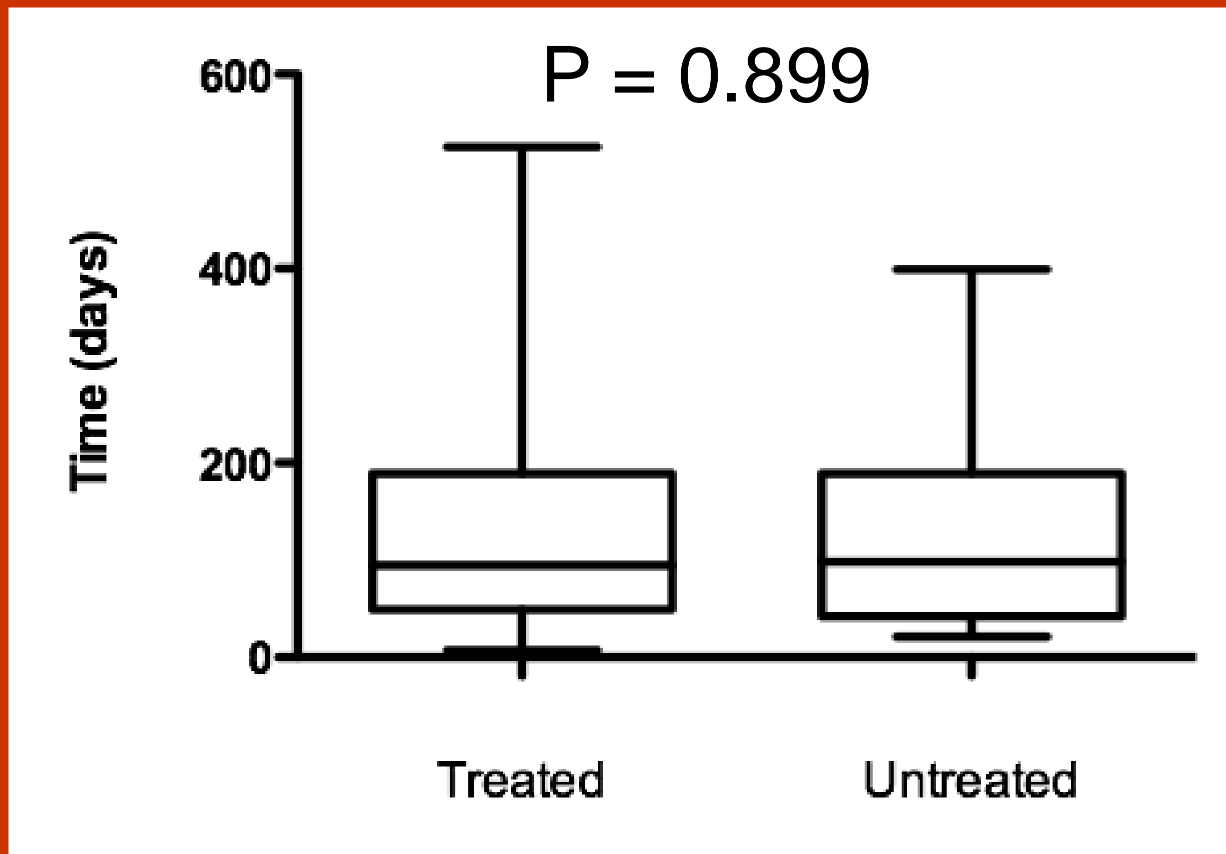


2005 IDSA Guidelines
Treatment of Coccidioidomycosis

"How best to manage primary respiratory coccidioidal infections is an unsettled issue **because of the lack of prospective controlled trails**."

Median days to ≥50% decline in total clinical score



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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

Ampel et al. CID 2009

Antifungals for Primary Coccidioidal Pneumonia

- Always
  - Yes/No
- If not always, then
  - Patient's call?
  - Illness > ~4 weeks?
  - For symptoms of
    - Night sweats/weight loss?
    - Chest pain/cough?
    - Skeletal?
    - Fatigue?
- Dose of oral azole
  - 200 mg/day
  - 400 mg/day
  - 800 mg/day
- Duration
  - Less than 1 month
  - 1 – 2 months
  - 3 – 6 months
  - 1 year or longer?

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Thank-you

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