A paradigm for the evaluation and management of spinal coccidioidomycosis

Nikolay L. Martirosyan MD; Carmine Zoccali MD; Orel Zaninovich BS; Jesse M. Skoch MD; Ali A. Baaj MD

Introduction

Coccidiodomycosis is a fungal infection that is endemic to parts of the Southwestern United States. When it affects the spine, the treatment strategies can be challenging. Given the rarity of this disease, we have devised a management protocol for spinal coccidiodomycosis based on a review of the literature and our experience at the University of Arizona Medical Center.

Methods

The electronic literature search of National Library of Medicine for publications from 1964 to 2014 was performed using following keywords: Coccidioidomycosis and spine. The search was limited to the English language and yielded total 24 papers. Treatment strategies were summarized into treatment protocol.

Results

A total of 164 cases of spinal coccidiomycosis were identified (131 males and 26 females). The average age was 28.3 years. Risk factors include HIV, diabetes, and steroid therapy. Location: the thoracic and lumbar vertebral involvement was more common, followed by cervical spine and sacrum (83, 80, 43 and 14 cases respectively). Medical Therapy: antifungal therapy with amphotericin B or fluconazole. In most of the cases medical therapy needs to be continued indefinitely to reduce disease recurrence or progression. Surgical treatment includes procedures stabilizing spine and decompressing neural elements.

Patients with suspected spinal cocidiomycosis require confirmatory CT-guided biopsy. Once diagnosis established patients start antifungal therapy. Surgical management is indicated in cases with mechanical instability, neurologic deficit, medically intractable pain, or progression of infection despite antifungal therapy. Figure 1 summarizes proposed protocol for management of spinal coccidiomycosis.

Conclusions

This work provides a working protocol for the management of spinal coccidiodomycosis. Medical management with antifungal agents provides satisfactory disease control in most cases. However, in patients with mechanical instability, neurologic deficit, medically intractable pain or disease progression surgical debridement and stabilization is often necessary.

Learning Objectives

By the conclusion of this session, participants should be able to:

1) Describe the importance of coccidiomycosis of spine

2) Discuss, in small groups protocol for the evaluation and management of spinal coccidioidomycosis

3) Identify an effective treatment spinal coccidioidomycosis

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