

# Incidence of Coccidioidomycosis Infections In Endemic Region Among Patients with Autoimmune Hepatitis

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## Background

- Coccidioidomycosis is a dimorphic yeast endemic to the southwestern United States.
- Most patients are often asymptomatic or have mild, influenza like illness. However, in immunocompromised patients they can have higher rates of complications such as meningitis, lytic bone lesions, and chronic pneumonia.<sup>1</sup>
- End stage liver disease patients have a higher incidence of coccidioidomycosis infection compared to that of general population.<sup>2</sup>
- **We set out to determine the incidence of coccidioidomycosis specifically in patients with autoimmune hepatitis (AIH) to better understand the epidemiology of this disease in this patient population.**

## Methods

- Retrospective analysis of patients with autoimmune hepatitis were queried in the Banner Health System from the period of January 1st, 2016 to December 31st, 2021.
- The chart was queried for Coccidioidomycosis IgG and IgM antibody testing as well as sex, and race.
- Patients were excluded if they lived outside of the endemic regions of Arizona, Colorado, New Mexico and Utah.

## Table 1. Demographics

Number of patients with autoimmune hepatitis (n)	1680
Total females (%)	77.6
Total males (%)	22.4
Average age (years)	57.1
Caucasian Ethnicity (%)	66

## Results

- The mean age (SD) was 57.1 (17.8) and 1304 (77.6%) patients were female and 376 (22.4%) males. 352 (20.9%) of these patients were tested for coccidioidomycosis. Of these, 28 were positive.
- The incidence rate of coccidioidomycosis in patients with AIH for this study was found to be 1667 per 100,000.

## Discussion/Next Steps

- This study demonstrates a greater incidence of coccidioidomycosis infections (1667/100,000) in patients with autoimmune hepatitis compared to the general population (98/100,000).<sup>3</sup>
- Further research needs to be undertaken to determine if patients with autoimmune hepatitis experience greater disease severity and hospitalization rates compared to the general population.
- **We would like to determine if autoimmune hepatitis patients may benefit from prophylactic treatment for coccidioidomycosis in the future.**

## References

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