



Can *Candida* spp. Cause Pneumonia?

Invasive fungal infections due to *Candida* spp. are associated with an estimated mortality rate of 20%.¹ However, diagnosis is difficult.

Candida spp in the respiratory tract is common

Candida colonization of the mouth and upper airway is common amongst the general public, including healthy individuals. *Candida* spp. may also contaminate respiratory cultures during specimen collection.²

Positive respiratory cultures for *Candida* spp. do not correlate with histopathological confirmed pneumonia

In one study with 232 deceased ICU patients who underwent post-mortem autopsy, 135 patients had evidence of pneumonia on lung tissue biopsy. Of those 135 with evidence of pneumonia on autopsy, 77 had pre-mortem respiratory cultures positive for *Candida* spp. None of those 77 patients were found to have *Candida* spp. as the cause of their pneumonia. Furthermore, 47 patients **without** pneumonia had pre-mortem respiratory cultures positive for *Candida* spp. Overall, no evidence of *Candida* spp. as the cause for pneumonia was found in any patients despite high rates of *Candida* spp. colonization.³

Infectious Diseases Society of America guideline recommendations⁴

IDSA guidelines note that growth of *Candida* spp. in a respiratory culture usually indicates colonization and rarely requires treatment. However, growth of *Candida* spp. from other non-sterile site cultures (e.g. urine culture), risk factors for invasive candidiasis, surrogate markers for invasive candidiasis (e.g. β -D-glucan), and severity of illness should be taken into consideration when assessing need for antifungal therapy.

Key Takeaway: *Candida* spp. growing in a respiratory culture likely represents colonization and alone does NOT require antifungal treatment. *Candida* growth in a respiratory culture may be significant in a broader clinical context if invasive candidiasis is suspected in a critically ill patient.

References:

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