*Other Reviews - - Other Review*

# The intermittent intrapulmonary deflation technique for airway clearance in patients with cystic fibrosis: A randomized trial.

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### Study design (if review, criteria of inclusion for studies)

systematic review

### List of included studies (38)

4 randomized controlled trials and 34 observational studies

### Participants

Patients with ABPA and either asthma or cystic fibrosis

### Interventions

Antifungal treatments: itraconazole, voriconazole, posaconazole, ketoconazole, natamycin, nystatin and amphotericin B.

### Outcome measures

Symptoms, frequency of exacerbations and lung function; biomarkers; radiological pulmonary infiltrates; adverse effects were also common.

### Main results

Thirty-eight studies - four randomized controlled trials and 34 observational studies - met the eligibility criteria. An improvement in symptoms, frequency of exacerbations and lung function was reported in most of the studies and was more common with oral azoles. Antifungals also had a positive impact on biomarkers and radiological pulmonary infiltrates, but adverse effects were also common. The quality of the evidence supporting these results was low or very low due to a shortage of controlled studies, heterogeneity between studies and potential bias.

### Authors' conclusions

Antifungal interventions in ABPA improved patient and disease outcomes in both asthma and cystic fibrosis. However, the recommendation for their use is weak and clinicians should therefore weigh up desirable and undesirable effects on a case-by-case basis. More studies with a better methodology are needed, especially in cystic fibrosis, to increase confidence in the effects of antifungal treatments in ABPA.

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### See also

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### Keywords

Adolescent; Adult; Antifungal Agents; Child; Itraconazole; pharmacological_intervention; Allergic Bronchopulmonary Aspergillosis -ABPA-; Aspergillus; Fungi; Infection; Respiratory Tract Infections; Respiratory Tract Diseases; Amphotericin;