Postinfectious cough in adults

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1 Postinfectious cough affects 11%–25% of adults after a respiratory infection

Postinfectious cough is defined as a subacute cough, with symptoms lasting between 3 and 8 weeks.[1] The preceding infection triggers an inflammatory cascade, increasing bronchial sensitivity and mucus production, while reducing mucus clearance.[1]

2 Diagnosis is by exclusion

This clinical diagnosis requires a preceding respiratory infection, absence of concerning physical examination findings, and exclusion of other subacute cough mimics (e.g., asthma, chronic obstructive pulmonary disease [COPD], gastroesophageal reflux disease, or angiotensin-converting enzyme inhibitor use).[1,2] Pertussis should be considered in patients with a paroxysmal cough, post-tussive vomiting, and inspiratory whoop.[1]

3 Red flags and prolonged cough duration should prompt further work-up

The presence of hemoptysis, systemic symptoms, dysphagia, excessive dyspnea, or hoarseness warrants investigations such as a chest radiograph.[2] Other red flags include a history of recurrent pneumonia or an extended history of smoking.[2] Coughs that last longer than 8 weeks are considered chronic and require further assessment, such as a pulmonary function test to rule out asthma or COPD.[1]

4 No evidence supports pharmacologic treatment, which is associated with harms

Systematic reviews of randomized controlled trials evaluating inhaled corticosteroids, bronchodilators, and oral agents for postinfectioius cough concluded there is no evidence of benefit.[3,4] Most trials found cough symptoms improve without medication, highlighting the self-limiting nature of postinfectious cough.[3] Beyond medication adverse effects and costs, pressurized metered-dose inhalers emit powerful greenhouse gases.[5] Off-label use of inhalers can also tax the medical supply chain.

5 Patient reassurance and education are critical

Reassuring patients that postinfectious cough is time limited and self resolving can reduce unnecessary prescriptions, including of antibiotics.[6] Clinicians should advise patients to arrange a follow-up appointment for further work-up if their cough has not resolved within 8 weeks or if new symptoms appear.

References

1. Braman SS. Postinfectious cough: ACCP evidence-based clinical practice guidelines. *Chest* 2006;129(Suppl 1):138S-46S.
2. Irwin RS, French CL, Chang AB, et al. Classification of cough as a symptom in adults and management algorithms: CHEST guideline and expert panel report. *Chest* 2018;153:196-209.
3. Speich B, Thomer A, Aghlmandi S, et al. Treatments for subacute cough in primary care: systematic review and meta-analyses of randomised clinical trials. *Br J Gen Pract* 2018;68:e694-702.
4. Johnstone KJ, Chang AB, Fong KM, et al. Inhaled corticosteroids for subacute and chronic cough in adults. *Cochrane Database Syst Rev* 2013;(3):CD009305.
5. Fidler L, Green S, Wintemute K. Pressurized metered-dose inhalers and their impact on climate change. *CMAJ* 2022;194:E460.
6. McNicholas M, Hooper G. Effects of patient education to reduce antibiotic prescribing rates for upper respiratory infections in primary care. *Fam Pract* 2022;39:1-5.

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