Chronic Cough-Summary Handout

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H&P, CXR[a]

1. Constitutional sx, hemoptysis, abnormal lung exam or CXR --> evaluate and treat
2. Smoking, ACE-I --> d/c [b]
3. Cause of cough is suggested:
    - UACS: H1B, decongestant, INCS/saline[c] --> no response --> r/o sinusitis[d]
    - Asthma: ICS + prn B2-agonist --> no response --> PFTs/BPC --> LTRI, OCS[e]
    - GERD: PPI/TLC --> no response --> bid PPI[f] --> no response --> EGD vs pHM[g]
    - Post-infectious: UACS sx present : H1B; UACS sx absent: inhaled ipratropium[h]
    - Other causes suggested: evaluate and treat

poor response

Treat emperically[i]
UACS --> asthma / eosinophilic bronchitis[j]--> GERD
(if partial response, maitain tx while proceding to next)

poor response

1. PFTs/BPC, EGD/pHM if not done; induced sputum for eosinophils (esosinophilic bronchitis)
2. Chest CT +/- bronchoscopy (bronchiectasis, ILD, occult tumor/infx, foreign body, sarcoid)[k]
3. Echo, consider Holter
4. Referral

a. Recommended by ACCP, ETS (ETS also recommends spirometry for all). In practice, consider certain emperic measures first, eg withdrawal of ACE-I.
b. Cough will improve or disappear in 94-100% of patients, usually within 1 month. Consider lung cancer in any smoker, especially if cough is new or changed, if it persists more than 1 month after cessation, and if it is associated with hemoptysis outside of the context of airway infection. ACE-I-induced cough resolves within a few days to 2 weeks of stopping the Rx.
c. H1B = antihistamine, either oral or nasal (1st generation are more anticholinergic--good for all rhinitis [seromucus glands of the nose are under cholinergic control]; 2nd generation are primarily antihistamine--ineffective for nonallergic rhinitis). INCS = intranasal corticosteroids. Saline = saline sinus irrigation or nasal spray. H1B/decongestant tx leads to some improvement in a few days to 2 weeks; may take several weeks to months for marked improvement or resolution. Adjunctive tx: leukotreine inhibitor for allergic rhinitis, intranasal ipratropium bromide for nonallergic rhinitis.
d. With sinus CT; tx of chronic sinusitis (>12 weeks) without polyps: INCS x several months, OCS x 10 days, Abx (eg Augmentin) x 3-6 weeks +/- short course of intranasal topical vasoconstrictor; with polyps: refer (may need surgery, ASA desensitization)
e. ICS = inhaled corticosteroids. BPC = bronchoprovacation challenge (eg methacholine challenge). LTRI = leukotreine inhibitor. OCS = oral corticosteroids (eg, 10 days of prednisone 40[19]). Cough-variant asthma is treated as moderate asthma (daily ICS + prn B-agonist). Response is usually seen within 1 week; complete resolution may take up to 2 months. LTRI have been shown to improve cough in pts with cough-variant asthma who did not respond to ICS. A positive methlycholine challenge is not specific for cough due to asthma (one study: 22% false positive, ie 22% of pts were found to have cough due disease other than asthma[1]); best way to confirm that cough is due to asthma is by response to tx.
f. TLC = therapeutic lifestyle changes. PPI = equivalent of omeprazole 20. Bid PPI = equivalent of omeprazole 20 bid or 40 qd. Cough due to GERD may take up to 3 mo to improve and up to 6 mo to resolve; improvement in cough may lag behind improvement in GI symptoms. ACCP 2006 recommendations call for prokinetic agents (eg metoclopramide) as tx for refractory GERD; American Gastroenterological Association Institute 2008 guidelines recommend against metoclopromide due to side effects. FDA issued a black box warning on metoclopramide in 2009 due to the risk of tardive dyskinesia.
g. pHM = 24 hour ambulatory pH monitoring; more accurate than endoscopy but not widely available, lack or agreement on interpretation. Barium swallow has very low sensitivity. Refractory cough due to GERD may be due to non-acid reflux and may respond to surgery[18]
h. ipratropium bromide may alleviate cough by 1) decreasing stimulation of cough receptors by altering mucocilliary factors, and 2) blocking the efferent limb of the cough reflex
i. Consider pt preference re: order of empiric tx. If partial response to one tx, continue that tx and add the next.
j. Tx of esosinophilic bronchitis: ICS (eg, 400 mcg budesonide). Course OCS if refractory.
k. Bronchoscopy usually adds little if chest CT is negative; occult foreign body is an exception.

Keep in mind that a clinically silent disease (eg GERD) may be causing cough even if there seems to be an obvious cause (eg, known pulmonary sarcoidosis).

2006 ACCP Guidelines for Management of Cough