



Respiratory Illness & Anxiety

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“Neither I nor my spouse/partner has a relevant financial relationship with a commercial interest to disclose.”

Introduction

- Anxiety is common in those with pulmonary disorders, e.g.,
 - Asthma
 - Cystic fibrosis
 - COPD
 - Lung cancer
- Treatments involve:
 - Psychopharmacology
 - Behavioral treatments

Asthma

- The most common chronic disease in the US (17 million people)
- Often misdiagnosed as an anxiety disorder and *vice versa*
- Asthma and anxiety are often co-morbid
 - Anxiety may trigger an asthma attack and asthma often triggers anxiety

Asthma

- There was a 27% increase in the severity of asthma symptoms in NYC in the weeks post-9/11 (CDC, 2002)
- Psychological factors (including stress and anxiety) are powerful predictors of intubation
- Psychological factors and anxiety are associated with higher rates of mortality from asthma

Asthma

- Mechanisms of increased morbidity
 - Behavioral
 - Poor adherence
 - Poor technique with inhalers
 - Denial and delays in seeking care
 - Physiological
 - Vagus nerve mediates airway reactivity to emotion

Asthma

- Interventions to reduce stress
 - Biofeedback
 - Educational programs
 - Stress management/relaxation therapy
 - Yoga/Meditation
- Diagnose and treat anxiety disorders
 - Use DSM criteria and cardinal symptoms
 - Psychopharmacology/psychotherapy

Cystic Fibrosis

- Anxiety seen in most CF patients
- Depression and substance use disorders are common
- May lead to non-adherence with treatment
 - Adherent patients more likely to use optimistic acceptance and hopefulness
 - Non-adherent patients use avoidant strategies

Cystic Fibrosis

- Management
 - Treat stress/anxiety symptoms with:
 - Psychotherapy to improve coping strategies
 - Education
 - Groups (dealing with chronic illness)
 - Diagnose and treat anxiety disorders
 - Diagnose and treat co-morbid mood and substance use disorders

COPD

- 4th leading cause of death in the US
- Hypoxia causes:
 - confusion, disorientation, altered consciousness, and cognitive dysfunction
- Air hunger frequently leads to anxiety and feeling out of control
- Anxiety is common
 - prevalence of panic disorder is unclear

COPD

- Depression and anxiety lead to:
 - Lower exercise tolerance
 - Non-adherence with treatments
 - Increased disability
 - Higher rates of smoking
- Some treatments increase anxiety:
 - Steroids
 - Bronchodilators

COPD

- Interventions
 - Smoking cessation (don't be afraid of psychotropics)
 - Pulmonary rehab may increase one's sense of control and decrease anxiety
 - Exercise has a positive psychological effect
 - Relaxation techniques can be helpful
 - Pharmacologic treatments for anxiety and depression

Lung Cancer

- Psychological distress is common & may reduce survival
 - Insomnia
 - Loss of libido
 - Depression
 - Anxiety
 - Pain
 - Fatigue
 - Air hunger

Treatments

- Maximize control of symptoms that contribute to anxiety
 - Breathlessness
 - Bronchospasm
 - Excessive secretions
 - Hypoxia
- Drugs for respiratory symptoms may contribute to anxiety
 - Steroids
 - Bronchodilators
 - Theophylline

Treatments

- Pharmacologic
 - SSRIs for Generalized Anxiety Disorder and Panic Disorder (don't help much in the acute phase)
 - Buspirone may help in patients with hypercapnia
 - Benzodiazepines can be used in COPD/air hunger who don't retain CO₂
 - Short-acting without active metabolites (“OTL”: outside the liver)
 - Oxazepam
 - Temazepam
 - Lorazepam
 - Avoid long-acting benzos (e.g., diazepam) & beta-blockers
 - Watch for QTc prolongation
 - Agents in combination with SSRIs

Treatments

- Behavioral
 - Relaxation therapy
 - Hypnosis
 - Education
 - Pulmonary rehabilitation
 - Exercise
 - ? CBT

Summary

- Anxiety is common in many pulmonary illnesses
- Air hunger, medication side effects, and loss of control may cause anxiety
- Stress and anxiety worsen outcomes and increase morbidity and mortality in pulmonary illness
- Treatments include both behavioral and pharmacologic interventions
- SSRIs are the mainstay for chronic anxiety & short-acting benzos may be judiciously used

Recommended Reading

Brenes GA: Anxiety and chronic obstructive pulmonary disease: Prevalence, impact, and treatment. *Psychosom Med* 2003; 65: 963-970.

McCathie HC, Spence SH, et al: Adjustment to chronic obstructive pulmonary disease: The importance of psychological factors. *Eur Respir J* 2002; 19:47-53.

Rose C, Wallace L, et al: The most effective psychologically-based treatments to reduce anxiety and panic in patients with chronic obstructive pulmonary disease (COPD): A systematic review. *Patient Educ Couns* 2002; 47:311-318.

Sher Y, Georgiopoulos A, Stern TA, editors: *Facing Cystic Fibrosis: A Guide for Patients and Families*. MGH Psychiatry Academy, Boston, MA, 2019 (in press)