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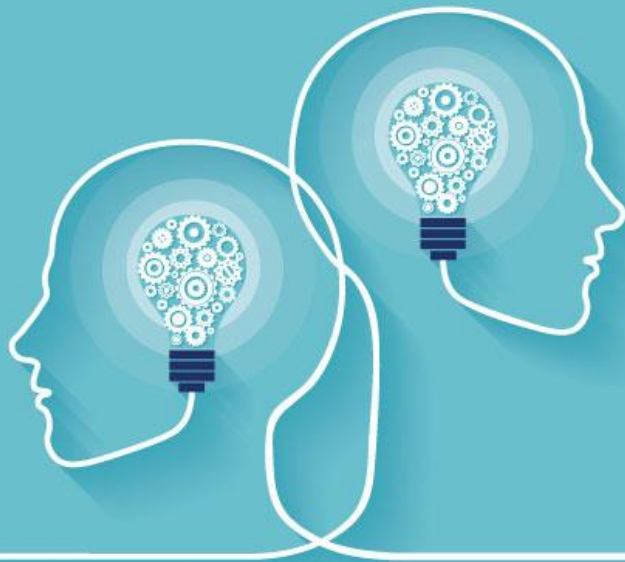
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شعار امسال روز جهانی آسم

رفع کاستی ها در مراقبت از آسم



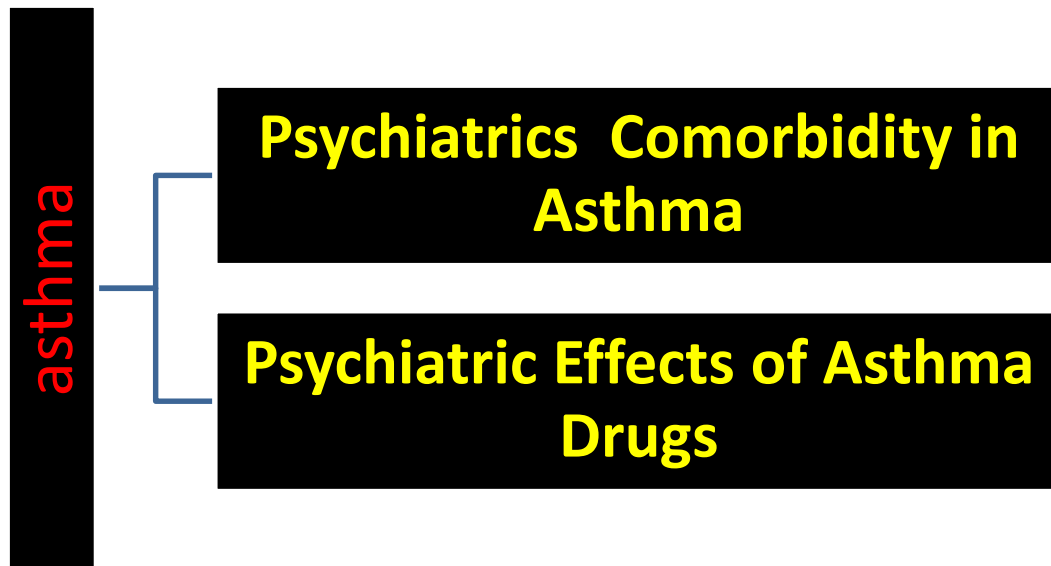
مدیریت اختلالات روانپزشکی در آسم



**CLOSING GAPS
IN ASTHMA CARE**

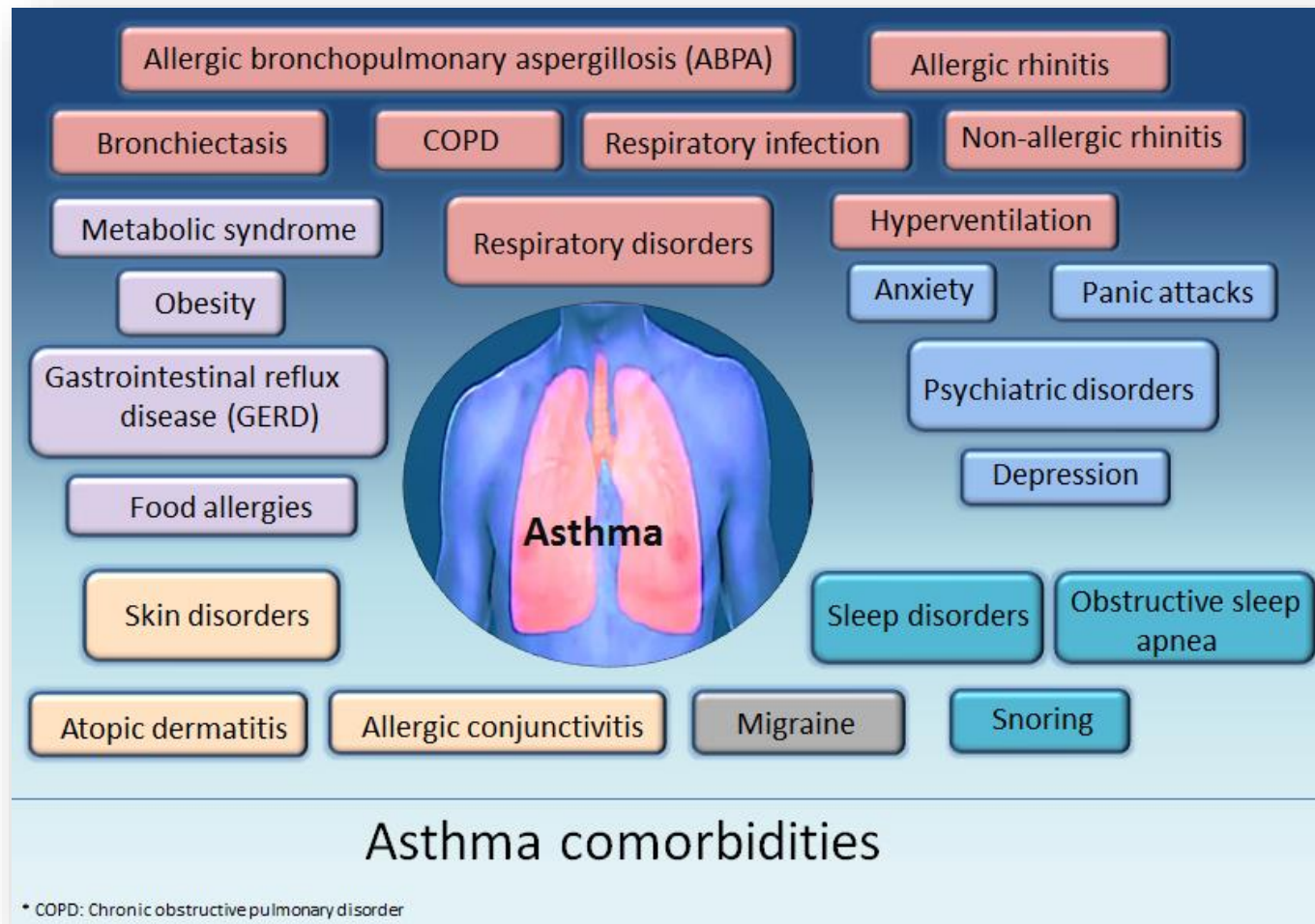
World Asthma Day • May 3, 2022

مدیریت اختلالات روانپزشکی در آسم



1

مدیریت اختلالات همراه در آسم



Asthma Linked to Psychiatric Disorders



Individuals with asthma may have an elevated risk of developing psychiatric illnesses such as depression, anxiety disorders, and posttraumatic stress disorder (PTSD).

The screenshot shows a web browser displaying a JAMA Network article. The browser's address bar shows the URL: jamanetwork.com/journals/jama/article-abstract/1149360#:~:text=Individuals%20with%20asthma%20may,large%20studies%20published%20in%20November. The JAMA Network logo is in the top left, and a search bar is in the top center. The article title is "Asthma Linked to Psychiatric Disorders" by Bridget M. Kuehn, published on January 9/16, 2008. The article is categorized under "Medical News & Perspectives". The abstract text states: "Individuals with asthma may have an elevated risk of developing psychiatric illnesses such as depression, anxiety disorders, and posttraumatic stress disorder (PTSD), according to a pair of large studies published in November. The 2 studies add to a growing body of evidence that suggests 3 possibilities: that asthma shares common risk factors with depression and anxiety disorders, that having asthma increases the risk of developing a variety of psychiatric disorders, or that certain psychiatric disorders increase the risk of asthma. The new studies also provide a clearer picture of which asthma patients are at greatest risk of psychiatric comorbidity and offer more evidence about the role genetics may play in the association." On the right side, there are buttons for "Download PDF", "Full Text", "Cite This", and "Permissions". Below these is a "Coronavirus Resource Center" link. At the bottom right, there is a "Trending" section with two items: "Opinion Shared Grief—Bridging the Health Equity Gap" dated January 26, 2021, and "Opinion A Song for Gram—The Music of Grief" dated December 15, 2020. The Windows taskbar is visible at the bottom of the screen.

JAMA Network

Search All Enter Search Term Sign In

This Issue Citations 25

Medical News & Perspectives

January 9/16, 2008

Asthma Linked to Psychiatric Disorders

Bridget M. Kuehn

JAMA. 2008;299(2):158-160. doi:10.1001/jama.2007.54-a

Full Text

Individuals with asthma may have an elevated risk of developing psychiatric illnesses such as depression, anxiety disorders, and posttraumatic stress disorder (PTSD), according to a pair of large studies published in November.

The 2 studies add to a growing body of evidence that suggests 3 possibilities: that asthma shares common risk factors with depression and anxiety disorders, that having asthma increases the risk of developing a variety of psychiatric disorders, or that certain psychiatric disorders increase the risk of asthma. The new studies also provide a clearer picture of which asthma patients are at greatest risk of psychiatric comorbidity and offer more evidence about the role genetics may play in the association.

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Coronavirus Resource Center

Trending

Opinion
Shared Grief—Bridging the Health Equity Gap
January 26, 2021

Opinion
A Song for Gram—The Music of Grief
December 15, 2020

Comorbidities in adolescents with asthma



Allergic conditions/ atopy

Anxiety



Depression

Gastroesophageal reflux (GERD)

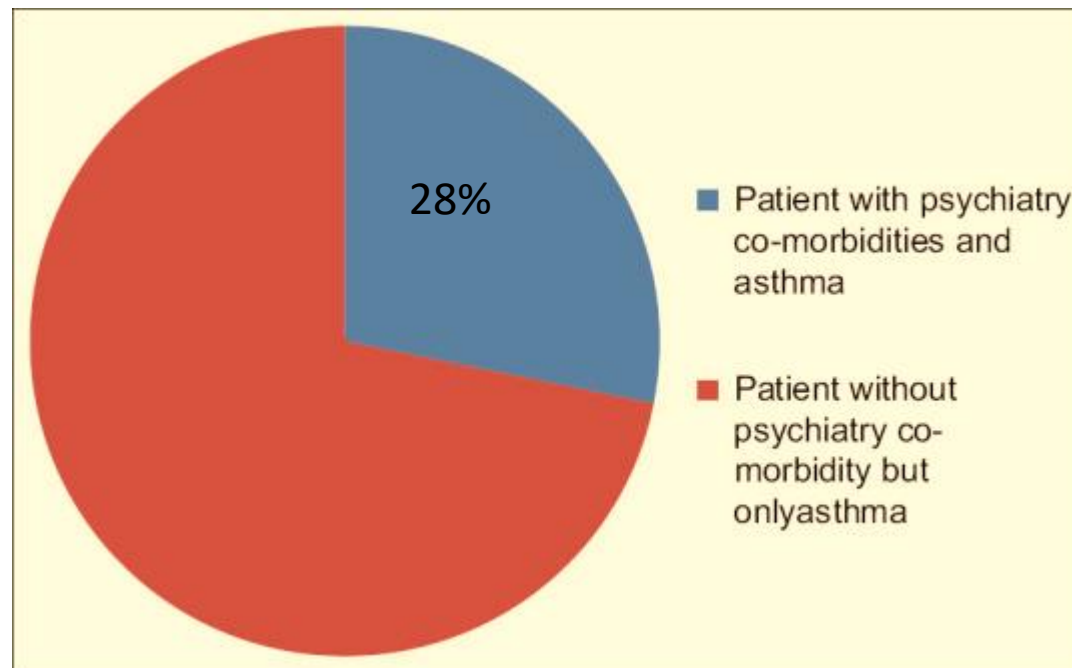
Obesity

Obstructive sleep apnea

Rhinosinusitis

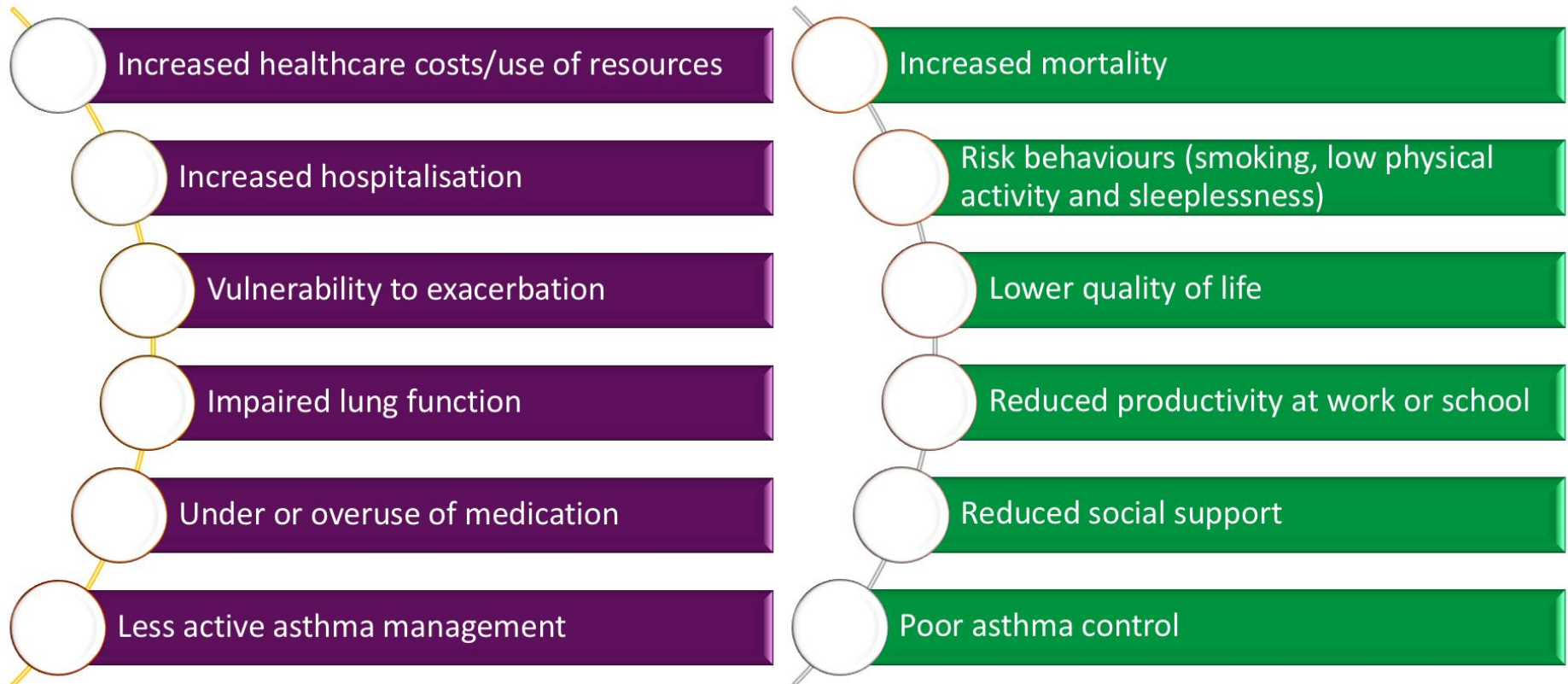
Vocal cord dysfunction

Prevalence of psychiatric comorbidities in asthma



doi: 10.4103/jfmmpc.jfmmpc_1331_20

Comorbid conditions can :



Psychiatric Comorbidity in Asthma Patients



Depression

Psychological factors

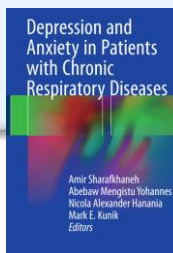
depression

- Estimates of the prevalence of depression in patients with asthma vary widely.
- In the **general asthma** population, the reported prevalence is 11–18% for **depression**.
- Among patients with **severe uncontrolled asthma** 31% had symptoms of **depression**.



Risk factors associated with development of anxiety and depressive symptoms in asthma.

1. Increased physical disability
2. Poor quality of life
3. Poor adherence to treatment
4. Prenatal smoking exposure
5. Low perceived control of asthma
6. Caucasian (white race)
7. Active smokers
8. Prednisone dependent
9. Severity of wheezing
10. Severity of respiratory impairment
11. Maladaptive behaviour
12. Female gender
13. Physical inactivity
14. Inadequate social support
15. Lower socio-economic status



Asthma and Depression: It's Complicated

- Depression in asthma patients can cause a worsening of respiratory symptoms and an increase of the disease exacerbations.
- Depression is also a risk factor for developing **severe life-threatening** asthma.

A. Chan et al .2015 - European Respiratory Society

Asthma and Depression: It's Complicated

-A population study by Goldney et al examined the relationship between depression and a number of symptoms known to be related to asthma severity, and found that **dyspnoea**, **wakening at night**, and **morning symptoms** were particularly strongly associated with depression.

Joe K. Gerald- 2015



Psychiatric Comorbidity in Asthma Patients



Anxiety Disorders

Anxiety

- Estimates of the prevalence of anxiety in patients with asthma vary widely.
- In the **general asthma** population, the reported prevalence is 11–37% for **anxiety**.
- Among patients with **severe uncontrolled** asthma, 81% had significant **anxiety** symptoms.



Anxiety

- Asthma and anxiety comorbidity is associated with **increased somatic complaints**, perhaps explaining diagnoses of panic disorder and GAD (Farrell et al., 2011).
- These children may experience increased chest tightness, wheezing, and coughing, which may **mimic panic symptoms**.

Separation Anxiety

- Asthma exacerbations are also often paired with anxiety and fear, and children may develop a **learned aversion to** environmental and situational triggers of asthma (e.g., animals, physical activity; Farrell et al., 2011).
- Furthermore, children with asthma may develop separation anxiety as they may fear what would happen to them **if separated from a caregiver.**

Panic disorder

Is It Asthma or a Panic Attack?



Panic disorder and Asthma

Box 9.5: Panic Disorder: Four or more of the following symptoms
(American Psychiatric Association)³²

1. Palpitations, pounding heart, or accelerated heart rate
2. Sweating
3. Trembling or shaking
4. Sensations of shortness of breath or smothering
5. Feeling of choking
6. Chest pain or discomfort
7. Nausea or abdominal distress
8. Feeling dizzy, unsteady, lightheaded, or faint
9. Feelings of unreality (derealization) or being detached from oneself (depersonalization)
10. Fear of losing control or going crazy
11. Fear of dying
12. Numbness or tingling sensations (paresthesias)
13. Chills or hot flashes

Panic disorder and Asthma

- Many of the manifestations in panic attack are **similar to** manifestations of acute attack of asthma.
- Approximately **one asthma** patient **in ten** has **panic disorder** **whereas** asthma and other chronic respiratory diseases are **3 times** more common in patients with **panic disorder** than among those with other psychiatric disorders or general population.

S. Stanescu et al-2019

Similarities vs. differences

- Both asthma and panic attacks can cause breathing difficulties and a tight feeling in your chest.
- One key difference is that the constriction in your airways during an **asthma** attack can **decrease oxygen intake**, while hyperventilation in a **panic attack** can **increase oxygen flow**.
- Panic attacks also pose a wide range of symptoms beyond breathing difficulties. **Wheezing** and **coughing** are also symptoms usually only associated with **asthma attacks**.

Psychiatric Comorbidity in Asthma Patients

Posttraumatic stress disorder

POST-
TRAUMATIC
STRESS
DISORDER



Post-asthma attack PTSD

- In a study, **20 percent** of **adolescents** who had a life-threatening asthma episode were experiencing PTSD symptoms at a high enough level that they could be diagnosed with PTSD.
- The **parents** of adolescents who had a life-threatening asthma episode were also showing signs of PTSD. Almost **30 percent** of the parents of adolescents who had a life-threatening asthma episode met criteria for PTSD due to the asthma episode compared to only 2 percent of parents of adolescents without asthma.

KEAN et al-2006



PTSD Symptom Clusters

Intrusion	Avoidance	Cognition & Mood Changes	Arousal & Reactivity Changes
<ul style="list-style-type: none">• Involuntary & recurrent memories• Traumatic nightmares• Flashbacks• Intense or prolonged distress after exposure to reminders	<p>Avoiding trauma-related</p> <ul style="list-style-type: none">• Thoughts• Feelings• People• Places• Conversations• Activities• Objects• Situations	<ul style="list-style-type: none">• Can't recall key features of event• Negative beliefs about self or world• Distorted blame• Persistent fear, horror, anger, guilt or shame• Diminished interest in activities• Feeling alienated• Inability to feel positive emotions	<ul style="list-style-type: none">• Irritable or aggressive• Self-destructive• Hypervigilance• Exaggerated startle response• Problems with concentration• Sleep problems

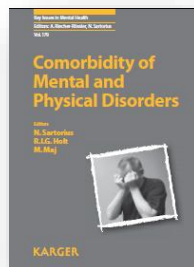
Other mental health conditions

Panic disorder with or without agoraphobia, personality disorders, alexithymia, somatization, mood disorders, schizophrenia, eating disorders, substance use disorders, and general occurrence of any psychiatric disorder

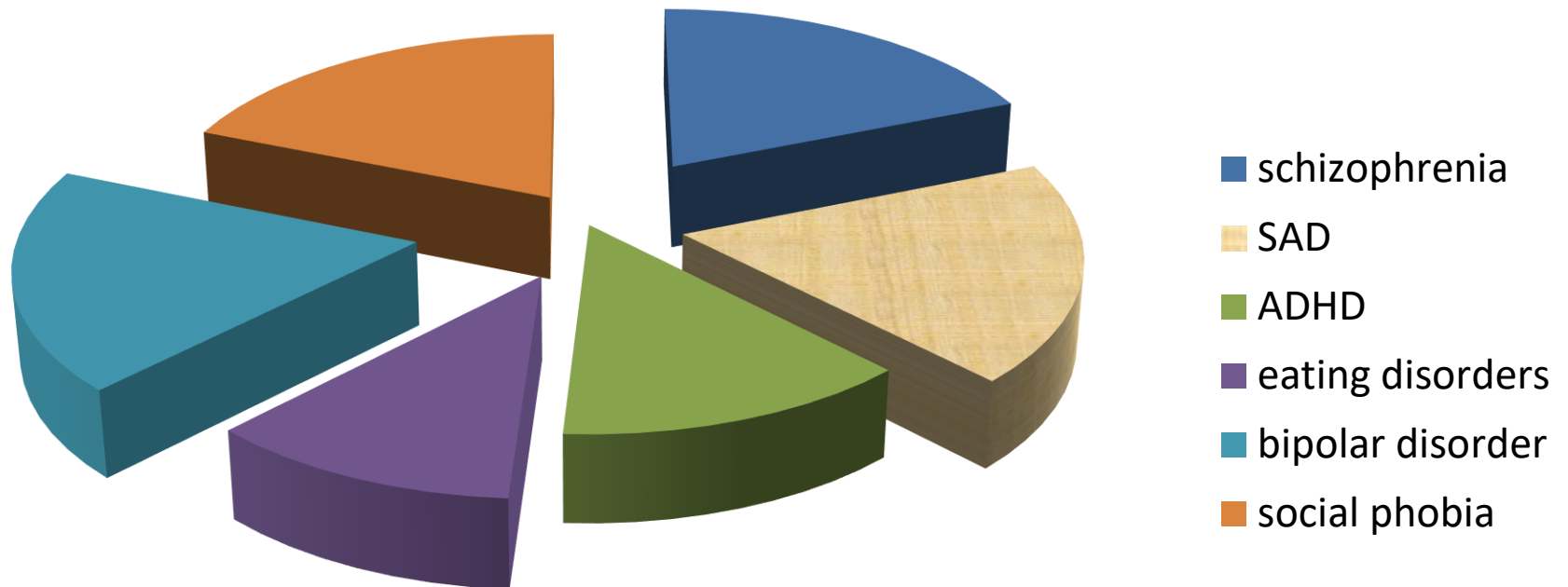
npj Primary Care Respiratory Medicine (2019) 37

Addiction and Asthma

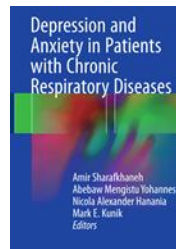
- Exacerbation of asthma symptoms can occur in **heroin users** , possibly associated with histamine release by the opioid.
- Bronchial and lung dysfunction in **cocaine users** include cough, black sputum, hemoptysis and chest pain . Some studies have reported an exacerbation of asthma symptoms in those who smoke crack cocaine and a higher incidence of out-of-hospital asthma deaths.



Psychiatric Comorbidity in Asthma Patients



Management of Anxiety and Depression in Asthma



Indications for hospitalization

- Duration and severity of asthma symptoms
- Severity of airflow obstruction
- Course and severity of prior exacerbations
- Medication use and access to medications
- Adequacy of support and home conditions
- Presence of psychiatric illness

Pulmonary Rehabilitation

- Pulmonary rehabilitation (PR) has been shown to improve exercise capacity, quality of life and improve depressive and anxiety symptoms and is now considered cornerstone in the management of chronic obstructive pulmonary disease (COPD).

Exercise therapy

Exercise therapy should be the first line of treatment for adult asthmatic patients with comorbid mild or moderate depressive and anxiety of symptoms. The exercise therapy should be tailored to individual's need in terms of repetition, intensity and duration

Exercise therapy

-In a community-based rehabilitation including gymnasium, asthmatic patients should be encouraged to engage in a group or individual exercise programs to break the cycle of negative thoughts and hopelessness that feed into anxiety and Depression.

Counselling therapy and educational therapy

Counselling therapy and educational therapy should be considered for adults asthmatic patients with elevated symptoms of anxiety and depression. It is paramount as well to monitor asthmatic patients with comorbid anxiety and depressive symptoms in routine clinical visits or telephone contacts, e.g. using the HAD scale.

Counselling therapy and educational therapy

If there is no improvement after the course of counselling therapy in depression or anxiety symptoms, further treatment can be considered to high intensity psychological interventions such as one-to-one CBT or group CBT. This depends on the patient's choice and provision of psychological therapy including CBT in local setting.

Cognitive Behavioural Therapy

Cognitive behavioural therapy (CBT) is an action-oriented treatment in which both cognitive (e.g. identification and challenging of interpretation errors) and behavioural (e.g. planned exposure to avoided sensations and situations) strategies are used to interrupt the panic and/or anxiety cycle and facilitate more adaptive responses.

Cognitive Behavioural Therapy

- For those asthmatic patients with high level of depressive and anxiety symptoms with suicidal ideation should be offered antidepressants drug therapy preferably selective serotonin reuptake inhibitors because of their low side effects.
- In addition, follow-up visits, at least every 4 weeks, especially at the early stages are paramount in order to monitor the patient's adherence to treatment and progress and adverse events.

Antidepressants

- If any depressive conditions are observed, it is necessary to treat them with an anti-depressant.
- But anti-depressants are known to have an anti-cholinergic action and, because of this action, patients may find it difficult to cough up sputa.

Antidepressants

- Thus, it is better to start with an anti-depressant that is **less anti-cholinergic**, such as those drugs that inhibit the selective reuptake of serotonin, while paying full attention to the adverse effects.

Anticholinergic Effects

Strong anticholinergic effects : TCA (eg. amitriptyline, doxepin, imipramine).

Moderate anticholinergic effects : Duloxetine, Fluoxetine, Mirtazapine, Paroxetine
Reboxetine , Venlafaxine

SSRI	citalopram	☆	CELEXA
	escitalopram	☆	CIPRALEX
	FLUoxetine		PROZAC
	fluvoxamine		LUVOX
	PARoxetine		PAXIL
	sertraline	☆	ZOLOFT

Antidepressants

- The selective serotonin reuptake inhibitors (SSRIs) **citalopram** and **escitalopram** have been studied for the treatment of depression in patients with asthma in randomized, double-blind trials (Brown et al. 2005, 2012).

Antianxiety

Anti-anxiety drugs have a **respiratory depression** and a **muscle-relaxing** action, and it is better **not to use** them in cases of severe attacks and when symptoms are complicated.

-If it is necessary to use one, an anti-anxiety drug of the non-benzodiazepine type can be safely used, as this type of agent has less muscle relaxing and respiration-restricting action.

مدیریت اختلالات روانپزشکی در آسم

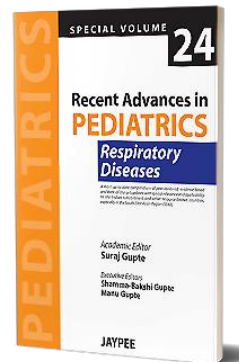
asthma

**Psychiatric Comorbidity
in Asthma**

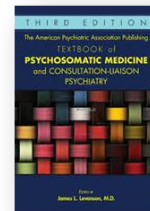
**Psychiatric Effects of
Asthma Drugs**

2

Psychiatric Effects of Asthma Drugs

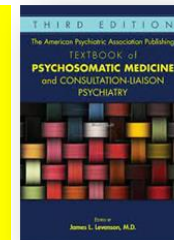


Psychiatric Effects of Pulmonary Drugs



- **Systemic corticosteroids** are frequently prescribed for patients with pulmonary diseases.
- **Long-term corticosteroid use** is associated with side effects, such as **suppression of** the hypothalamic-pituitary-adrenal (HPA) axis and immune system, glaucoma, cataracts, truncal obesity, thinning and bruising of the skin, and loss of bone mineral density.

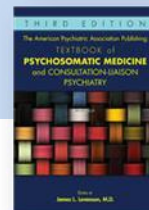
Psychiatric Effects of Pulmonary Drugs



- Corticosteroids are also associated with an **increased risk of depression, mania, and mixed episodes** (Judd et al. 2014) .
- **Acute, high-dose corticosteroid therapy** appears to be more strongly associated with mania or hypomania, while **chronic, lower-dose therapy** may be more associated with depression.
- **Psychotic symptoms**, including delusions, hallucinations, and disorganized thought processes, also can occur.

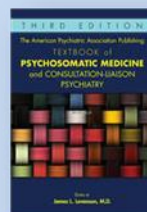
Psychiatric Effects of Pulmonary Drugs

- The **most common neuropsychiatric effects** of corticosteroids may be **cognitive changes**.
- The **hippocampus**, a brain region involved in memory, appears to be particularly sensitive to corticosteroid effects, with some studies showing volume decreases (Brown 2009 ; Brown et al. 2004).
- **Diffuse cognitive changes**, including **delirium**, are also reported during corticosteroid therapy (Fardet et al. 2012).

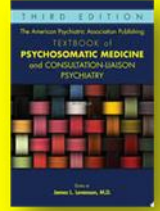


Psychiatric Effects of Pulmonary Drugs

- Even **inhaled** corticosteroids can cause HPA axis suppression at higher doses, as well as psychiatric side effects.



Other medications

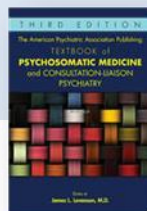


- **Theophylline** and **beta 2 -adrenergic agonists** are sometimes associated with anxiety, insomnia, restlessness, agitation, and depression.
- Theophylline may even be associated with an increased risk of **suicidal ideation** (Favreau et al. 2012).
- Initial reports suggested that **leukotriene inhibitors** may cause psychiatric symptoms, such as agitation, insomnia, anxiety, depression, and suicidal ideation, although more recent analyses do not suggest a link with completed suicide .

(Gibbons and Mann 2011)

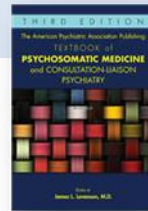
Psychopharmacology in Pulmonary Disease

- In general, pharmacological treatment of **psychiatric disorders** such as depression, anxiety, and psychosis in this population is similar to that in other patient populations.



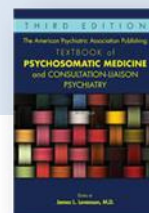
Benzodiazepines

- Can significantly **reduce** the ventilatory response to hypoxia.
- This may precipitate respiratory failure in a patient with marginal respiratory reserve and **contraindicates** their use in patients with **carbon dioxide retention**.
- Benzodiazepines **are not contraindicated** for use in all patients with COPD and asthma.



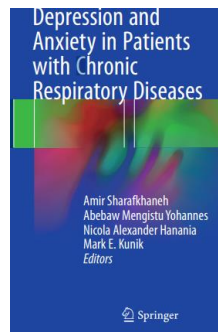
Benzodiazepines

- In elderly patients, shorter-acting benzodiazepines with no active metabolites, such as **lorazepam** and **oxazepam**, are preferred.
- Buspirone** does not adversely affect pulmonary function, its limitations are its potency and delayed therapeutic effect.
- Antipsychotics** are safer than benzodiazepines for treating acute anxiety in COPD, but rarely have caused laryngeal dystonia.

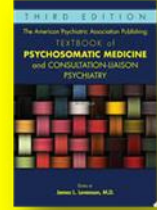


Conclusion

The authors suggest benzodiazepines should be considered as the last resort , if there was no improvement using opioids and other non-pharmacological treatments to control breathlessness.



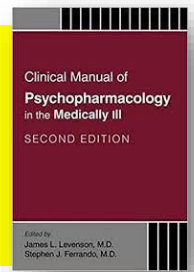
Antidepressants



- Little or no effect on respiratory function.
- Generally, **SSRIs other than fluvoxamine** have few drug interactions that are problematic in pulmonary patients.

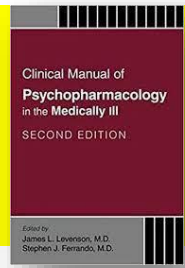


Antipsychotics



- Patients with asthma and COPD are particularly susceptible to **cardiac arrhythmias** (De Bruin et al. 2003).
- If antipsychotic medications are used, those most likely to cause **QTc prolongation** (ziprasidone, thioridazine) should **be avoided**, or the patients should be monitored.
- **Abrupt discontinuation of antipsychotics** with significant anticholinergic activity, such as clozapine, may cause cholinergic rebound, impairing the effectiveness of anticholinergic asthma medication (Szafrński and Gmurkowski 1999).

Antipsychotics



- Inhaled Loxapine for the Management of Acute Agitation in Bipolar Disorder and Schizophrenia.
- Inhaled loxapine is **contraindicated** in patients with asthma (Teva 2013).
- In a study of inhaled loxapine in patients with asthma, 53% of subjects experienced **symptomatic bronchospasm** of mild or moderate severity.



Mood Stabilizers

Clinical Manual of
Psychopharmacology
in the Medically Ill
SECOND EDITION

Edited by
James L. Levenson, M.D.
Stephen J. Ferrando, M.D.

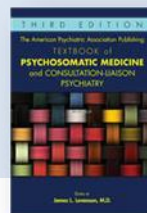
- Carbamazepine may cause cough, dyspnea, pulmonary infiltrates, and idiopathic pulmonary fibrosis.



Lithium



-Most pulmonary medications **do not affect lithium** levels, but **theophylline** can lower lithium levels by 20% to 30%.



THIRD EDITION

The American Psychiatric Association Publishing

TEXTBOOK of
PSYCHOSOMATIC MEDICINE
 and CONSULTATION-LIAISON
 PSYCHIATRY

Edited by
 James L. Sommers, M.D.

- **Donepezil** :contraindicated in asthma.



- Should be **prescribed cautiously** in patients with asthma or COPD since acetylcholine is a potent mediator of **bronchoconstriction**.

-Recommended drugs and drugs to avoid in dementia and Asthma/COPD : Beta-agonists
Inhaled anticholinergics (have not been reported to affect cognition) ,Theophylline

Psychiatric side effects of common pulmonary drugs

TABLE 20–1. Psychiatric side effects of common pulmonary drugs

Anticholinergics	Auditory and visual hallucinations, anxiety, confusion, delirium, depersonalization, amnesia, paranoia
Antileukotrienes	Anxiety
Beta-agonists (selective)	Anxiety in susceptible patients
Beta-agonists (nonselective)	Anxiety, psychosis
Corticosteroids (inhaled)	None
Corticosteroids (systemic)	Depression, mania
Cromolyn	Irritability
Cycloserine	Agoraphobia, anxiety, depression, psychosis
Isoniazid	Amnesia, anxiety, depression, hallucinations, mania, psychosis
Theophylline	Anxiety, delirium, insomnia, mutism, restlessness, tremor

Source. Adapted from *The Medical Letter* 1998, 2002.

The End

- Comments
- Question and answer
- Thank you!



Tehran University of
Medical Sciences