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Review article on pharmacotherapy for depression and anxiety disorders

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Abstract

Depressive and anxiety disorders are extremely common and are linked with an elevated rate of care utilization, a significant disease burden, significant economic consequences, and a substantial decrease in the standard of living for patients as well as their families. Numerous effective therapies for depression and anxiety disorders exist, including various types of psychotherapy and antidepressant drugs. Both methods of therapy are being shown to be effective, although it is unclear if they are equally effective for any kind of depression or anxiety disorder. Although psychological treatment and antidepressant drugs are effective in treating anxiety and depression, it is unclear if they are equally successful for every kind of disorder or whether different types of treatment, such as antidepressants and psychotherapy, are equally effective for each disorder. Psychiatric medical care has an extensive variety of course of action types and aims, ranging from basic supporting or medication-compliance treatments to completely autonomous and comprehensive regimens. According to studies, there is an intricate connection between cognitive-behavioral therapy (CBT) and medication in the management of anxiety and depression. When used to treat persistent depression to avoid recurrence, a combination of therapies may be useful. Drug therapy that includes a defined treatment paradigm, targets for fulfillment, complementary measures, and frequent monitoring is likely to serve as a suitable comparison condition for determining if autonomous psychological therapy adds value. Drug therapy is a successful therapy for anxiety-related conditions, although the implications for the quality of life have yet to be thoroughly studied. Anxiety and depressive disorders are extremely common and are linked with a substantial decrease in the standard of living for patients as well as their families, a substantial amount of service utilization, significant economic expenditures, and a major burden of disease for the general population.

Keywords: Depression, Antidepressants, Psychotherapies, Cognitive Behavioral Therapy

1. Introduction

Anxiety-related conditions are the most frequent form of mental health condition. According to the National Comorbidity Survey Replication (NCS-R), anxiety disorders are the most frequent type of psychiatric condition, accounting for approximately 32 percent of the total prevalence in the United States. The two most frequent anxiety disorders are social anxiety disorder (SAD) and particular phobia. According to the World Health Organization, around 264 million individual's worldwide struggle with anxiety-related conditions, indicating an increase of fifteen percent since 2005. Anxiety can cause job and school absenteeism and has a greater financial impact compared to other mental health conditions due to its greater incidence^[4]. Generalized anxiety disorder occurs when you experience high, unreasonable concern and tension for little or no apparent reason. Panic disorder: You experience abrupt, overwhelming terror, which leads to an acute panic attack. During an anxiety attack, you might perspire profusely, feel discomfort in your chest, and experience a hammering pulse. You may get symptoms similar to fainting or having a cardiac event. Social anxiety disorder, also known as social phobia, occurs when you are overwhelmed with fear and feel self-conscious in regular interactions with others. You stress over the possibility of being judged, shamed, or humiliated by others. Specific phobias are strong fears of a particular object or scenario, such as cliffs or planes. The fear extends beyond what is reasonable and may force you to steer clear of regular circumstances. Agoraphobia is an acute worry about being caught in a situation where it appears difficult to get away or seek aid in the event of a crisis. For instance, you might feel fear or anxiety while on a flight, using public transit, or waiting

with a crowd. Separation anxiety is not limited to young children. Anyone can get separation anxiety disorder. If you do, you will experience intense anxiety or panic when someone nearest you departs your view. You'll perpetually be worried about what horrible could happen to the person you love. Selective mutism is a form of social anxiety in

which young children who regularly communicate with their families refrain from speaking in public, such as at school. Medication-induced anxiety disorder: The use of some pharmaceuticals or illegal drugs, as well as drug discontinuation, can cause anxiety-related symptoms [5].

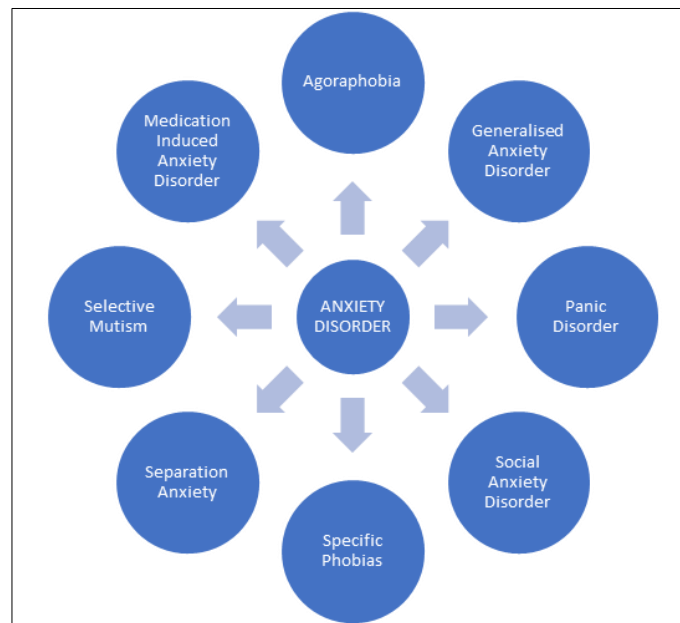


Fig 1: Various types of Anxiety disorders

Depression

Cognitive impairments are frequently observed throughout periods of depression and have long been the subject of intense research attention. Most research has focused on identifying the components of mental functioning that may be impaired [8]. Depression is still treated as a separate diagnostic thing, particularly in health care settings [11]. To diagnose a severe case of depressive disorder, more than five signs must be present for at least two weeks, indicating an alteration from a prior state of working. A minimum of one of the signs must be depression or loss of interest or

pleasure. (ii) The signs of depressive disorders include mood swings, reduced enthusiasm or enjoyment in tasks, a reduction in weight or gain, sleeplessness or hypersomnia, psychomotor disturbances or developmental delays, tiredness, diminished energy, feelings of feeling worthless, overbearing guilt, impaired thinking and concentration, lack of direction, and self-harm. (iii) The signs do not match the requirements for a mixed episode; (iv) Signs must cause severe anxiety or a lack of functioning. (v) Warning signs should not be associated with chemicals, medical problems, or grief [11].

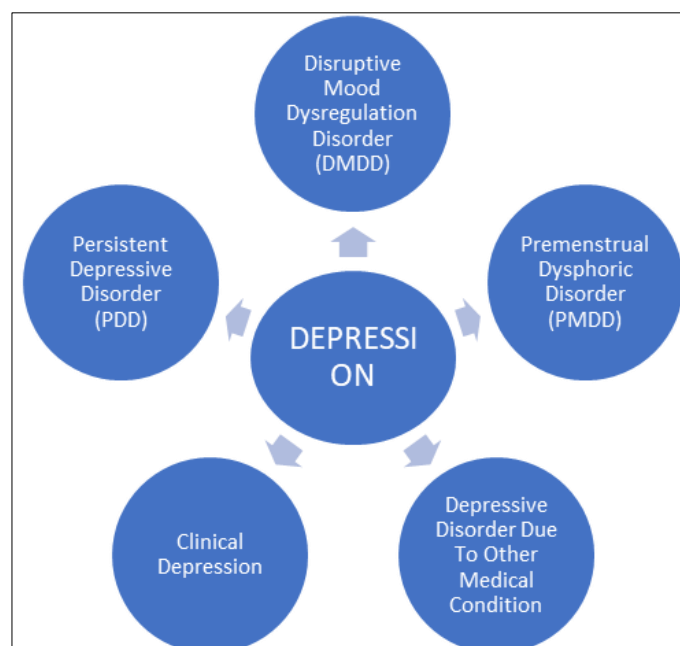


Fig 2: Various types of Depression

Treatment

Serotonergic/norepinephrinergic antidepressants

The FDA, or Food and Drug Administration, has granted approval for a number of selective serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs) for Parkinson's disease, GAD, and SAD. Regardless of these categorizations, drugs not licensed for a specific ailment are frequently used "off-label" in healthcare settings. Both selective serotonin reuptake inhibitors (SNRIs) and first-line therapies for PD, GAD, and SAD have been demonstrated to be effective for the management of anxiety-related disorders. A current meta-analysis found that most SSRIs and SNRIs are more effective than placebo in treating GAD, with escitalopram and duloxetine potentially having the greatest effect sizes. The suggested treatment period varies and might range from three to six months to 1-2 years or longer. Despite the fact that tachyphylaxis is a worry, there is little evidence of long-term SSRI or SNRI use having negative consequences. These drugs are also often easily tolerated, with minor side effects such as dizziness, headaches, mouth dryness, bowel movements, or constipation [9].

Mixed Antidepressants

Mirtazapine has a large pharmacological effect, with presynaptic antagonism. Its advantages include improved sleep and appetite, increased safety for senior patients, reduced interactions between drugs, and a lower risk of sexual adverse effects as contrasted with SSRIs and SNRIs. Gaining weight is one of the side effects of antihistamines, along with drowsiness and dry mouth. There have been very few clinical trials evaluating mirtazapine for anxiety-related conditions [9].

Bupropion is a dopaminergic norepinephrine reuptake inhibitor licensed for use in MDD, ADHD, and smoking cessation. Even though bupropion has been utilized as an adjuvant to alleviate sexual adverse effects among individuals with anxiety who are on SSRIs, there's been little research into this medicine as a standalone treatment for stress [9].

Nefazodone, a serotonergic-modifying antidepressant expected to impede 5-HT reuptake and block postsynaptic 5-HT₂ receptors, is the only medication permitted by the FDA for mental disorders [9].

Gamma aminobutyric acid (GABA)

Benzodiazepines: Benzodiazepines are cited as first-line therapy for stress in medical settings prior to SSRIs, with potential dangers of tolerance, reliance, overuse, or misuse, along with worries regarding geriatric falls. Nevertheless, there is little data to suggest that SSRIs and other first-line therapies are superior to, or better tolerated than, benzodiazepines for anxiety-related disorders, particularly GAD, particularly for short-term use and perhaps beyond eight weeks of therapy [9]. BZDs may be used to treat generalized anxiety disorder in eligible patients who have not responded to or tolerated several trials of SRIs and buspirone. They increase the CNS inhibitory effects of endogenous GABA by allosteric regulation of the GABA receptor. Since the introduction of SRIs as first-line treatments, most experts have advised against taking BZDs in the long term, citing issues with tolerance and reliance as well as a lack of documented effectiveness for concurrent depression [10].

Anticonvulsants

Anticonvulsants have FDA approval for fibromyalgia, pain caused by neurons, and seizures. Pregabalin has been shown in several studies to be effective and well-tolerated for the treatment of generalized anxiety disorder [10]. Based on the data for pregabalin, it has been proposed that gabapentin, an earlier GABA analog with an identical structure and mode of action, may also be beneficial in treating symptoms of generalized anxiety disorder [10].

TriCyclic Antidepressants (TCA)

A few TCAs have shown efficacy in treating generalized anxiety disorder. They function by attaching to and suppressing the SERT and NET, as well as directly regulating particular 5-HT receptors. Unfortunately, their binding affinity is extremely nonselective, resulting in a wide spectrum of undesirable consequences [10]. TCAs also have a limited therapeutic window and can be deadly in overdose due to low blood pressure, arrhythmias of the heart, anticholinergic poisoning, and neurological effects ranging from convulsions to coma. Thus, TCAs should be taken with caution by individuals who have a previous record of attempts to commit suicide due to a prescription overdose [10]. There is a widespread perception that physical activity and exercise improve mood and anxiety, and numerous studies have found a link between physical activity and overall well-being, mood, and stress. In keeping with this, intervention research has shown that physical activity has calming and anti-depressive properties in both healthy participants and patients. However, the bulk of published research contains significant errors in methodology [13]. TCAs have also been proven to be effective in multiple RCTs of young people suffering from stress, especially clomipramine, which has FDA approval for treating OCD in kids 10 years old and up [14].

Antihistamines

Double-blind RCTs with placebo and active comparators, such as BZDs or buspirone, have supported the histamine-blocking drug hydroxyzine and shown that it is as effective as these well-established therapies for generalized anxiety disorder. According to the trials, the typical daily dose is 50 mg, divided twice or three times each day, with drowsiness being the most common side effect [10].

Conclusion

It is feasible to assess mental health treatment efficacy on a national scale. The majority of people with a suspected depression or anxiety illness do not obtain proper treatment. Anxiety and depression-related conditions are frequent, and they have a significant influence on productivity and standard of living. Antidepressant medicines, cognitive-behavioral, and interpersonal psychotherapies are among the most successful therapies for depressive disorders, according to national treatment recommendations. 1-5 Despite the fact that available information on dysthymia therapies is limited, evidence shows that they are effective [12]. Anxiety-related conditions are frequent in kids and teens and can cause major deficits in their daily lives, often due to psychological evasion, which can hinder normal tasks related to development. Other drug choices, such as tricyclic antidepressant medications and the imminent use of benzodiazepines, may be tried, although these lack data and have extra hazards. Recent human and animal research

demonstrates that anxiety-related disorders are linked to alterations in neuronal function and structure and that effective therapies with psychoanalysis or pharmaceuticals improve these neurological conditions in a variety of forms [14]. For decades, psychiatry has struggled to discover breakthrough pharmacologic medications that are expressly designed to treat anxiety disorders. Nonetheless, the field is making gradual progress through rigorous research into repurposing drugs previously licensed for other disorders to treat anxiety effectively. In this review, I looked at the extensive evidence base for pharmacological therapy of primary anxiety disorders, with revisions to include the most recent research supporting off-label usage of classes of drugs such as new medications for depression, anticonvulsants, and the second-generation anti-psychotics [10].

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