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Treatment of Anxiety Disorder: A Review

Rushikesh Jadhav*, Trupti Ghorpade, Santosh Waghmare,Ashwini Andhale, Dr.H. V. Kamble

- *NAME OF INSTITUTE: Loknete Shri Dadapatil Pharate Patil College Of Pharmacy, Shirur, Pune,412211*
- *Department of Pharmacology*

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ABSTRACT

Anxiety disorders (generalized anxiety disorder, panic disorder/agoraphobia, social anxiety disorder, and others) are the most prevalent psychiatric disorders, and are associated with a high burden of illness. Anxiety disorders are often underrecognized and undertreated in primary care. Treatment is indicated when a patient shows marked distress or suffers from complications resulting from the disorder. The treatment recommendations given in this article are based on guidelines, meta-analyses, and systematic reviews of randomized controlled studies. Anxiety disorders should be treated with psychological therapy, pharmacotherapy, or a combination of both. Cognitive behavioral therapy can be regarded as the psychotherapy with the highest level of evidence. First-line drugs are the selective serotonin reuptake inhibitors and serotonin-norepinephrine reuptake inhibitors. Benzodiazepines are not recommended for routine use. Other treatment options include pregabalin, tricyclic antidepressants, buspirone, moclobemide, and others. After remission, medications should be continued for 6 to 12 months. When developing a treatment plan, efficacy, adverse effects, interactions, costs, and the preference of the patient should be considered.New developments are forthcoming in the field of alternative strategies for managing anxiety and for treatment-resistant cases. Additional treatment enhancements should include the development of algorithms that can be easily used in primary care and with greater focus on managing functional impairment in patients with anxiety.

Keywords: Generalizedanxiety disorder, Panic disorder, Psychotherapy,Diagnostic Dilemmas, Pharmacology, Phytotherapy, Treatment

I. INTRODUCTION

Anxiety disorders are the most prevalent psychiatric disorders and are associated with a high burden of illness(1). With a 12-month prevalence of 10.3%, specific (isolated) phobias are the most common anxiety disorders(2),although persons suffering from isolated phobias rarely seek treatment. Panic disorder with or without agoraphobia (PDA) is the next most common type with a prevalence of 6.0%, followed by social anxiety disorder (SAD, also called social phobia; 2.7%) and generalized anxiety disorder (GAD; 2.2%). Evidence is lacking on whether these disorders have become more frequent in recent decades. Women are 1.5 to two times more likely than men to receive a diagnosis of anxiety disorder(3).

The age of onset for anxiety disorders differs among the disorders. Separation anxiety disorder and specific phobia start during childhood, with a median age of onset of 7 years, followed by SAD (13 years), agoraphobia without panic attacks (20 years), and panic disorder (24 years).GAD may start even later in life. Anxiety disorders tend to run a chronic course, with symptoms fluctuating in severity between periods of relapse and remission in GAD and PDA[2] and a more chronic course in SAD. After the age of 50, a marked decrease in the prevalence of anxiety disorders has been observed in epidemiological studies. GAD is the only anxiety disorder that is still common in people aged 50 years or more.

The current conceptualization of the etiology of anxiety disorders includes an interaction of psychosocial factors, eg, childhood adversity, stress, or trauma, and a genetic vulnerability, which manifests in neurobiological and neuropsychological dysfunctions. The evidence for potential biomarkers for anxiety disorders in the fields of neuroimaging, genetics, neurochemistry,

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neurophysiology, and neurocognition has been summarized in two recent consensus papers(4). For instance, post-traumatic stress disorder (PTSD) and obsessive–compulsive disorder (OCD) have been reclassified in the separate domains of Trauma and Stressor Related Disorders and Obsessive–Compulsive and Related Disorders, respectively(5).

The ABC Model of Anxiety

We recently applied a mathematical model using nonlinear dynamics to describe these processes and further developed this model to cover diagnostic presentations and their underlying processes(6). The model that we, for simplicity, call the "ABC model of anxiety" could be viewed as an interaction in space and time of alarms, beliefs and coping strategies (Fig 1).

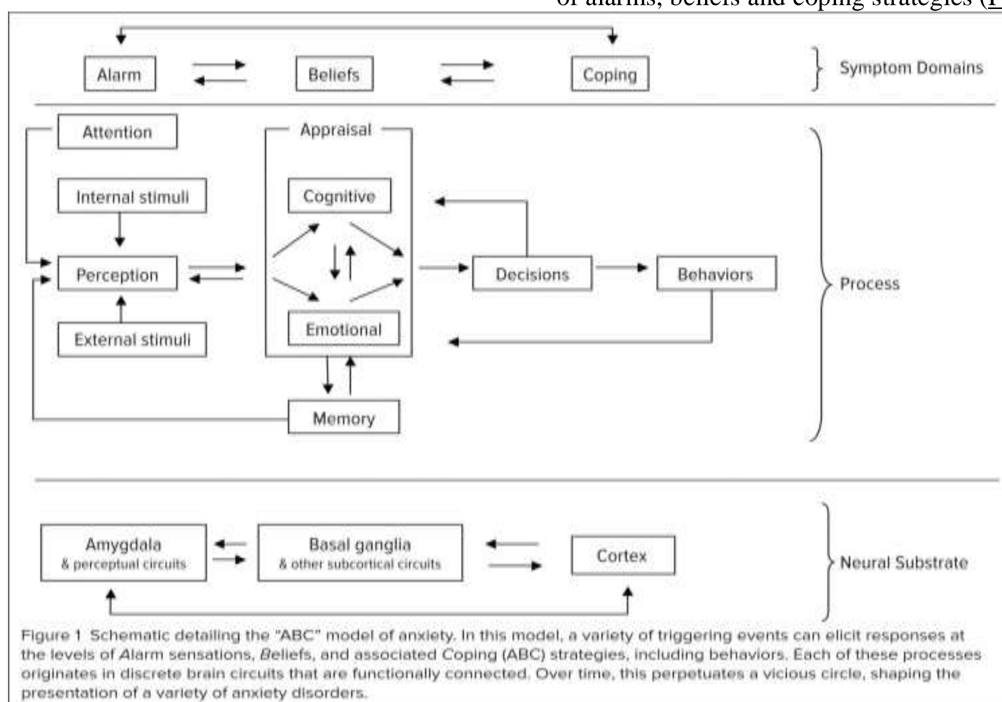

Figure 1 Schematic detailing the "ABC" model of anxiety. In this model, a variety of triggering events can elicit responses at the levels of Alarm sensations, Beliefs, and associated Coping (ABC) strategies, including behaviors. Each of these processes originates in discrete brain circuits that are functionally connected. Over time, this perpetuates a vicious circle, shaping the presentation of a variety of anxiety disorders.

Alarms (A) are emotional sensations or physiological reactions to a trigger situation, sensation, or thought. A well-defined set of brain circuits rapidly processes information about the alarm.

The ensuing decision to act is made on the basis of beliefs (B) that rely heavily on previous experiences, personal and cultural background, and the information that is perceived by the sensory organs. Patients with anxiety disorders appear to process information about a supposedly dangerous situation with more focused attention compared with individuals without the disorder. Accurate decision-making regarding beliefs is obscured by a flood of details, which leads to catastrophic thinking and indecision.

This, in turn, leads to coping strategies (C), for example, specific behaviors or mental activity aimed at reducing anxiety and avoiding the perceived "danger." Coping strategies can be considered adaptive or maladaptive, based on their efficacy in reducing the target anxiety. These processes evolve over time, forming a complex picture of a particular anxiety disorder(7).

Pharmacotherapy

First-line drugs are the selective serotonin reuptake inhibitors and **serotonin-norepinephrine** reuptake inhibitors. Benzodiazepines are not recommended for routine use. Other treatment options include pregabalin, tricyclic antidepressants, buspirone, moclobemide, and others.

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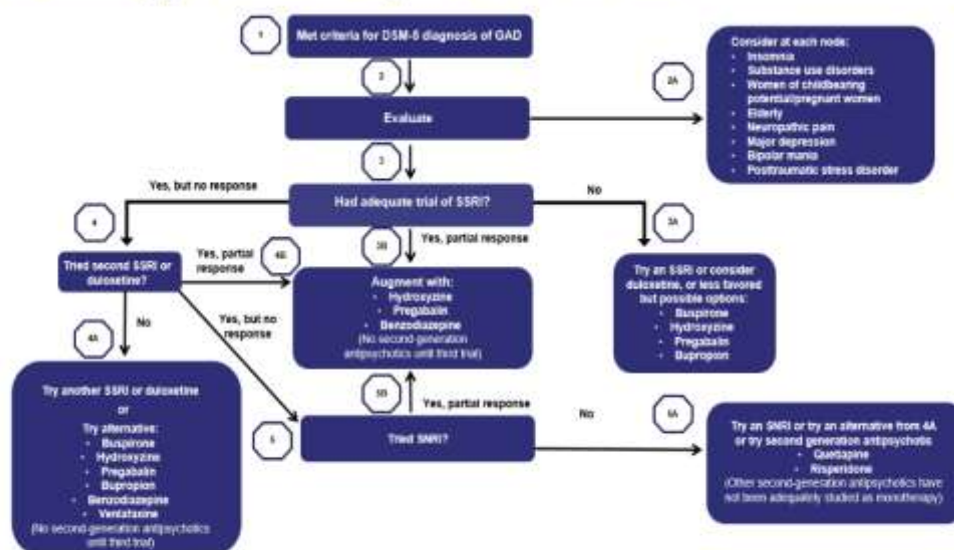

Fig 2 : Pharmacotherapy on anxiety disorder

Interplay Between Biological and Psychological Factors

In order to treat an anxiety disorder effectively, clinicians should understand how these conditions emerge and which factors are involved in maintaining them. In recent years, we have gained a better understanding of the interplay between genetic, biological, and stress factors that shape the presentation of the disorder, although it is not clear which factors are inherited.

One possibility is that abnormal cognition could be the inherited factor. Cognitive theory assigns a primary importance to abnormal or "catastrophic" cognition as an underlying mechanism of all anxiety disorders. Most cognitive strategies for treatment and research were developed in earlier years.

The ABC model focuses on the interaction of information processing and emotional and cognitive processes that are controlled by overlapping circuits and compete for the same brain resources(8).

In most anxiety disorders, patients usually process fear-inducing information in excessive detail that overwhelms their ability to appraise it properly. They cope by separating the information into "good" and "bad" with no gray area in between. As a result, they consider the worst-case scenario (i.e., by catastrophizing about the situation) and then act to protect themselves against the perceived danger

Phytotherapy

Some controlled studies have shown the efficacy of an orally taken lavender oil preparation in GAD and mixed anxiety/depression.It has yet to be established whether lavender oil is as effective as standard treatments. The comparison studies only used low doses of the comparators, eg, 20 mg paroxetine per dayor one tablet of lorazepam 0.5 mg per day,which may have led to insufficient efficacy of the comparison drugs(9).

Some other phytotherapeutics have been investigated in individuals with anxiety conditions. Due to the low quality of these studies, the evidence for the investigated products is not sufficient (for a review, see Sards et al). Standardization may be an issue in herbal preparations. For example, it was shown that different preparations of St. John's wort exhibited

large differences in the content of the putatively effective ingredients(10).

Shifting Treatment to Primary Care

In today's managed care environment, the treatment of anxiety usually takes place in the primary care setting. Given the increasing limits on primary care physicians' time, it is not surprising that anxiety disorders are underrecognized and undertreated. At the same time, SSRIs (antidepressants) are increasingly used in primary care, and physicians in fact are the largest group of prescribers. This is a mixed blessing for several reasons:

- SSRIs are often prescribed quickly in response to emotional distress that might not meet criteria for an anxiety disorder.
- The dose and duration of therapy might be inadequate.
- Adverse effects might not be managed by any means other than by discontinuation of the treatment.

This state of affairs may partly explain why psychiatrists are seeing more patients who are disenchanted with numerous failed attempts at pharmacotherapy.

Another problem in primary care is a lack of understanding of behavioral strategies that result in low referral rates to mental health professionals. There has been a trend toward developing comprehensive treatments for panic disorder to be delivered by primary care physicians.

In one study, an algorithm was tested for the treatment of panic disorder(11) This study reflected the trend of how psychiatrists became more like consultants to primary care physicians, assisting them with correct initial management plans and taking over the management of more severe and treatment-resistant anxiety.

Management of Treatment-Resistant Anxiety

In managing refractory anxiety, it is important to start with a re-evaluation of the patient, including the diagnosis; comorbidities; and the interplay of cognitive, stress-related, and biological factors. Inadequate coping strategies on the part of patients and their family members should be reviewed. Doses and duration of the initial treatments should be assessed.

Initially, more intensive CBT, combined with an adequate trial of SSRIs, SNRIs, or both, may be needed in refractory anxiety. After that, the treatment may progress to a combination of SSRIs with antiepileptic or atypical neuroleptic agents, especially if bipolar disorder or a psychotic disorder is suspected(12,13) Later, partial hospitalization in specialized centers with more extensive CBT and medication management might be recommended(14).

Although other forms of therapy have not demonstrated efficacy in anxiety disorders, they may be helpful for addressing personality issues in chronically anxious patients.

Psychotherapy

All patients with anxiety disorders require supportive talks and attention to the emotional problems that are associated with the anxiety disorder. Psychoeducation includes information about the physiology of the bodily symptoms of anxiety reactions and the rationale of available treatment possibilities. Many patients may require formal psychological treatment interventions, which are mostly done on an outpatient basis.

The treatment of anxiety disorders by CBT is described in more detail in the article by Borza in this issue of Dialogues in Clinical Neuroscience (p 203). The efficacy of CBT for all anxiety disorders has been shown in a large number of controlled studies. If avoidance of feared situations is a relevant factor in phobic disorders, exposure techniques should be included in the treatment schedule, in which patients are confronted with their feared situations.

In comparison with CBT the evidence for psychodynamic therapy is weaker(15) Controlled studies with psychodynamic therapy were markedly fewer in number, and of lower quality, than those with CBT, and some comparison studies have shown superiority of CBT.

For specific phobias, there are only studies with behavioral therapy, which should be performed as exposure treatment. In the available treatment studies, it was shown that only a few sessions (eg, one to five) were necessary for effective treatment of specific phobias.

In recent years, many studies have investigated psychological therapies that are performed via the Internet, usually involving minimal or no contact with a therapist. However, at present, evidence is lacking that these treatments are as effective as individual CBT with face-to-face contact(16) Internet therapies may be an option for regions in which psychotherapy is not widely available or to bridge the waiting period before a "real" therapy is scheduled to begin. They are also less expensive than face-to-face psychotherapies.

However, important issues have to be solved, including reimbursement by health insurance systems, data protection, the problem of "remote diagnosis" without direct contact, assessment of suicidality, and medicolegal aspects.

Treating children and adolescents

hereas specific phobias, SAD, and separation anxiety disorder are common in younger people, PDA and GAD are relatively rare. There are some randomized, placebo-controlled studies of pharmacotherapy for anxiety disorders in children and adolescents showing efficacy of sertraline, fluoxetine, and duloxetine in young patients with GAD, of venlafaxine and paroxetine in SAD, and of sertraline, fluvoxamine, and fluoxetine in mixed samples, including patients with separation anxiety disorder, GAD, and SAD(17) However, little is known about the value of long-term treatment.The combination of CBT and sertraline was found to be more effective than both treatment modalities alone.

There had been concerns about increased risk for suicidal ideation (not suicides) in children and adolescents treated for major depression with SSRIs (escitalopram, citalopram, paroxetine, and sertraline), mirtazapine, and venlafaxine(18)

Pregnancy and breastfeeding

or pregnant women, the risk of an untreated anxiety disorder must be weighed against the risk of damage to the unborn child as a result of treatment. A large study suggested no substantial increase in the risk of cardiac malformations attributable to antidepressant use during the first trimester.However, antidepressants have been associated with increased risk of spontaneous abortions, stillbirths, early deliveries, respiratorydistress, and endocrine and metabolic dysfunctions.Nevertheless, the current evidence suggests that the use of many antidepressants, especially the SSRIs, is favorable compared with exposing the mother to the risks of untreated depression or anxiety disorders(19).

Other Treatment Option

- Exercise
- Meditation
- Acupuncture
- Osteopathy
- Homeopathy

II. CONCLUSION

Anxiety disorders are treatable. Effective treatments have been developed, and algorithms have been refined. However, more work needs to be directed toward merging of our knowledge of the biological mechanisms of anxiety with treatment in order to more accurately predict and improve treatment response. Dynamic models of anxiety—such as the ABC model—can be helpful in understanding the interplay between processes responsible for development and maintenance of the symptoms over time and between biological and psychological factors affecting them.GAD and other anxiety disorders are the most prevalent mental disorders. We should continue to test alternative therapies for treating and preventing anxiety disorders and to help patients whose anxiety is resistant to conventional treatments.

REFERENCES

[1]. Kessler RC., Petukhova M., Sampson NA., Zaslavsky AM., Wittchen HU. Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. Int J Methods Psychiatr Res. 2012;21(3):169–184.

[2]. Jacobi F., Hofler M., Strehle J., et al Mental disorders in the general population: study on the health of adults in Germany and the additional module mental health (DEGS1-MH) [in German]. Nervenarzt. 2014;85(1):77–87.

[3]. Bandelow B., Michaelis S. Epidemiology of anxiety disorders in the 21st century. Dialogues Clin Neurosci. 2015;17(3):327–335.

[4]. Bandelow B. Epidemiology of depression and anxiety. In: Kasper S, den Boer JA, Ad Sitsen JM, eds. Handbook on Depression and Anxiety. New York, NY: M Dekker. 2003:49–68.

[5]. Phillips KA, Friedman MJ, Stein DJ, et al. Special DSM-V issues on anxiety, obsessive–compulsive spectrum, posttraumatic, and dissociative disorders. Depress Anxiety. 2010;27(2):91–92.

[6]. ystritsky A, Nierenberg AA, Feusner JD, Rabinovitch M. Computational non-linear dynamical psychiatry: A new methodological paradigm for diagnosis and course of illness. J Psychiatr Res. 2012;46(4):428–435.

[7]. Feusner JD, Townsend J, Bystritsky A, et al. Visual information processing of faces in body dysmorphic disorder. Arch Gen Psychiatry. 2007;64(12):1417–1425.

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[8]. Rabinovich MI, Muezzinoglu MK, Strigo I, Bystritsky A. Dynamical principles of emotion–cognition interaction: Mathematical images of mental disorders. PLoS One. 2010;5(9):e12547.

[9]. Woelk H., Schlafke S. A multi-center, double-blind, randomised study of the lavender oil preparation Silexan in comparison to lorazepam for generalized anxiety disorder. Phytomedicine. 2010;17(2):94–99.

[10]. Wurglics M., Westerhoff K., Kaunzinger A., et al Comparison of German St. John's wort products according to hyperforin and total hypericin content. J Am Pharm Assoc (Wash). 2001;41(4):560–566.

[11]. Roy-Byrne PP, et al. Moving treatment research from clinical trials to the real world. Psychiatr Serv. 2003;54(3):327–332.

[12]. Hollander E, Bienstock CA, Koran LM, et al. Refractory obsessive–compulsive disorder: State-of-the-art treatment. J Clin Psychiatry. 2002;63(Suppl 6):20–29.

[13]. Liebowitz MR. Update on the diagnosis and treatment of social anxiety disorder. J Clin Psychiatry. 1999;60(Suppl 18):22–26.

[14]. Bystritsky A, Liberman RP, Hwang S, et al. Social functioning and quality of life comparisons between obsessive–compulsive and schizophrenic disorders. Depress Anxiety. 2001;14(4):214–218.

[15]. Bandelow B., Lichte T., Rudolf S., Wiltink J., Beutel ME. The diagnosis of and treatment recommendations for anxiety disorders. DtschArztebl Int. 2014;111(27-28):473–480.

[16]. Sarris J., Panossian A., Schweitzer I., Stough C., Scholey A. Herbal medicine for depression, anxiety and insomnia: a review of psychopharmacology and clinical evidence. Eur Neuropsychopharmacol. 2011;21(12):841–860.

[17]. Hussain FS., Dobson ET., Strawn JR. Pharmacologic treatment of pediatric anxiety disorders. Curr Treat Options Psychiatry. 2016;3(2):151–160.

[18]. Committee on Safety of Medicines (2014). Selective serotonin reuptake inhibitors (SSRIs) and serotonin and noradrenaline reuptake inhibitors (SNRIs): use and safety. Medicines & Healthcare products Regulatory Agency (MHRA). Available at: https://www.gov.uk/government/publications/ssris-and-snris-use-and-safety/selective-serotonin-reuptake-inhibitors-ssris-and-serotonin-and-noradrenaline-reuptake-inhibitors-snris-useand-safety. Accessed 18 May 2017.

[19]. Oyebode F., Rastogi A., Berrisford G., Coccia F. Psychotropics in pregnancy: safety and other considerations. PharmacolTher. 2012;135(1):71–77.