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PANIC DISORDER: CARDIOLOGY AND PSYCHOLOGY IN ACTION

TRANSTORNO DO PÂNICO: CARDIOLOGIA E PSICOLOGIA EM AÇÃO

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ABSTRACT

This essay presents some reflections about the diagnostic process in the field of mental disorders with clinical symptoms, specifically, Panic Disorder (PD), and their impact on the Health System and the routine of the emergency services. It also points out some guidelines to receipt, management and referral of users who present this psychic-emotional suffering. Chest pain is one of the most common symptoms in the primary care emergency medical services. As a symptom that is present in both panic disorder and myocardial ischemia in coronary artery disease (CAD), many individuals affected by PD believe they are on the verge of a serious health problem, such as acute myocardial infarction. The case of PD is an example of the blurring of borders between the somatic and the psychic, as a mixture of physical and emotional symptoms can lead to confusion in the diagnostic process. Professionals act in a challenging context, with many demands being placed on them, which often include issues other than organic ones. It is essential that these professionals listen carefully, in order to make a differential diagnosis and proper referral, paying close attention when communicating with the patient who is seeking care.

Keywords: Panic Disorder; Coronary Disease; Psychotherapy; Emergency Medical Services; Anxiety Disorder; Chest Pain; Diagnosis, Differential.

RESUMO

O presente ensaio tem como objetivo apresentar reflexões sobre o processo diagnóstico no campo dos transtornos mentais com manifestações clínicas, especificamente, o transtorno do pânico (TP), assim como seu impacto no sistema de saúde e na rotina dos serviços de emergência, além de apontar diretrizes para o acolhimento, manejo e encaminhamento dos usuários que apresentam esse sofrimento psíquico-emocional. A dor torácica é um dos sintomas mais comuns nos serviços de emergência médica de atendimento primário. Por ser um sintoma presente tanto no transtorno do pânico quanto na isquemia miocárdica na doença arterial coronariana (DAC), muitos indivíduos acometidos por TP acreditam estar na iminência de um problema grave de saúde, como por exemplo, o infarto agudo do miocárdio. Temos no caso do TP um exemplo da ausência de fronteiras entre o somático e o psíquico, pois a mistura dos sintomas físicos e emocionais podem confundir o processo diagnóstico. O profissional atua em um contexto desafiador, pois se vê em meio a demandas que, muitas vezes, incluem questões de outra ordem além da orgânica. É fundamental que apure sua escuta para realizar um diagnóstico diferencial e o encaminhamento adequado, devendo ter cuidado ao se comunicar com o paciente que busca atendimento.

Descritores: *Transtorno de Pânico; Doença das Coronárias; Psicoterapia; Serviços Médicos de Emergência; Transtornos de Ansiedade; Dor no Peito; Diagnóstico Diferencial.*

INTRODUCTION

"*To be human is to have the capacity to get involved, to give oneself, and to be touched by others. It is this feeling, which is called care, and is the basis of affection. It is by caring for others that the human being develops notions of otherness and respect; fundamental values for the human experience and the prospect of interdisciplinary work…*".[1]

Emergency services (ES) routinely face challenges; including meeting the high demand of users who seek them for non-urgent health problems, and balancing resources and pharmaceutical supplies that must be effectively directed to those who need emergency interventions. The strategies used to identify and stratify health care involve the reception and screening of users, and the classification of risks from the reported symptoms.

Chest pain is an important symptom and should always be investigated, since its early identification allow us to act in potentially life-threatening clinical conditions. From the

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report of this symptom, the focus in the emergency room is to rapidly screen patients at risk of infarction; to determine the existence of myocardial ischemia; and to diagnose high-risk non-coronary cardiovascular diseases, pulmonary diseases, and upper digestive tract diseases.[2]

However, there is routinely an additional challenge for professionals working in this field - what to do with people who have chest pain, but no organic reasons to justify this symptom? To which pain do these people refer and suffer from if no signs of disease are found in the body (and in complementary tests)? How to attend to these people and conduct and refer these cases

This essay aims to present reflections on the diagnostic process in the field of mental disorders, with panic disorder (PD)-associated clinical manifestations, its impact on the health system and the daily routine of emergency services, in addition to providing guidelines for the reception, management and referral of people who manifest such emotional suffering.

From crisis to disorder – the Panic

Panic is a word of Greek origin - *panikós*/*panikon* - and its meaning is associated with repetitive dread. It is associated with the Greek mythology of the God Pan, who lived in the forest and frightened the mortals who ventured to cross it. The earliest nosological descriptions[2] of what we know today as PD dates back to the nineteenth century, as the "anxiety neurosis" described by Freud, Da Costa's "soldier's heart", Wheeler's "neurocirculatory asthenia", and Lewis's "syndrome of effort". These clinical conditions had in common the paroxysmal activation of the autonomic nervous system (ANS), which triggered symptoms such as vertigo, anxiety, sweating, dyspnea and paresthesia, as well as catastrophic thoughts associated with these symptoms.[4]

From the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III), which was published by the American Psychiatric Association (APA) in 1980, the clinical condition became known and diagnosed by the medical community as PD, mainly from Donald Klein's studies on the efficacy of imipramine in patients with episodic anxiety attacks.[3,5]

PD is the most studied anxiety disorder of the last 30 years[4] and is characterized by the occurrence of recurrent panic attacks (PAs), accompanied by persistent worry, with additional attacks and maladaptive behavioral alterations[6,7], which consist of a feeling of fear or intense malaise, accompanied by physical and cognitive symptoms, which begin abruptly, reaching maximum intensity in up to 10 minutes, with negative long-term consequences, such as loss of productivity, poor well-being, and social isolation.[4,8] PAs are not a mental disorder per se but rather a condition that may be present in the context of other anxiety disorders (generalized anxiety disorder and posttraumatic stress disorder).[3]

PAs have a sudden onset, with no mandatory triggering factor, and with at least four of the following symptoms: palpitations, sweating, tremors, feelings of shortness of breath or suffocation, chest pain or discomfort, nausea, abdominal discomfort, dizziness, instability, chills or hot flashes, paresthesia, derealization or depersonalization, fear of losing control or going mad, and especially fear of suffering an infarction and/or dying.[6]

PAs can occur during the day or night, with different implications for their management. Nocturnal panic attacks (NPA), which affect 44% to 71% of patients with PD, are related to a more severe subtype with a longer duration and more intense phobic symptoms, but with better pharmacological response, since its triggering is more heavily influenced by biological factors. On the other hand, diurnal PAs apparently, are more related to cognitive and psychological factors.[8]

PD is the recurrence of PA over a given period and at a given frequency, lasting for at least one month with one of the following conditions: persistent concern about the attack and its consequences and/or changes in behavior after the attack. In PD, recurrent behavioral components such as phobic avoidance (avoiding places or situations in which the PA occurred) and anticipatory anxiety (suffering in anticipation of a potential anxiogenic situation) become prevalent.[3]

Regarding its etiology, several factors have been indicated as causes of PD and both genetic and environmental factors seem to contribute to this disorder. Family and twin studies showed a risk of approximately eight times greater vulnerability to PD, with an estimated heritability of 43%; several polymorphisms in genes are under investigation, with no conclusive results so far.[4,8]

Stressful events, both in childhood and in adulthood, are also related to the development of PD and about 80% of those with the disorder reported some event in the 12 months preceding the onset of the disorder, with the most common being the transition of roles (90%) and losses (40%), but consistent studies show that the quality of the parental relationship is another relevant psychosocial factor.[4,8]

PREVALENCE

The prevalences of PD in the last 12 months were 2.7% and 1.8% in the USA and in Europe, respectively[7], but no Brazilian studies[4] were found with a representative sample. PD is more prevalent in women than men (2: 1), with an onset in adolescence or early adulthood (age, 20-30 years). It is present in the clinical history of first-degree white relatives and with reports of stressful life events, presenting anxiety, depression and use of psychoactive substances (smoking, caffeine, alcohol, and other drugs) as comorbidities. Although more common in young adulthood, PD can occur in children and adolescents, with a frequency of 5% to 6%, and with symptoms that are similar to those described above.[8] In a study of PD patients with anxiety, specific phobia was a comorbidity in 74%, social anxiety disorder in 66%, generalized anxiety disorder in 32%, and separation anxiety disorder in 13% of the patients. On the other hand, in PD patients with alcohol and drug abuse and dependence, alcohol alone accounted for 14% of patients and drugs alone for 11% of patients. Thus, it was observed that, in patients with PD, comorbidity with psychiatric diseases is a rule and not an exception.[9]

In an important study developed by the WHO/PAHO-Dalys (Disability-Adjusted Life Years) to assess the burden of diseases on premature mortality and years lived with limitations and disabilities, it was evidenced that mental illnesses are important

causes of the years of life lost, either by early mortality or by long-term limitations and disabilities, including depression, panic syndrome, and other forms of anxiety.[10]

Only 10% of PD diagnoses are performed by mental health professionals (psychiatrists or psychologists). Alternatively, 10% to 30% of the patients are diagnosed in medical clinics of neurology, otorhinolaryngology, and respiratory diseases; and up to 60% of the patients are diagnosed in cardiology clinics.[11]

PAs are among the most prevalent diagnoses in emergency services as most patients arriving at hospitals with complaints of chest pain are diagnosed with non-cardiac chest pain, leading to a high PD prevalence.[12] Approximately, 43% of the PD patients are initially treated at the emergency room, with 15% arriving at emergencies in ambulances.[13]

A study carried out in Canada[14] analyzed patients with symptoms of chest pain in emergency departments. The patients were assessed using an ergometric test or coronary arteriography with a psychiatric interview prior to the cardiology consultation. The study showed that, of the 1,364 patients with chest pain, 411 were diagnosed with PD and, among these, 306 were not diagnosed with coronary artery disease (CAD). On the other hand, of the 1,364 patients, only 248 were diagnosed with CAD without PD. That is, among those who were treated at the emergency room with chest pain, 30.1% were diagnosed with PD and 22.4% were diagnosed with PD without CAD. Among those diagnosed only with PD, 74.4% did not present CAD. Although the proportion of patients diagnosed with PD without CAD was significant, it is important to note that approximately 26% of patients diagnosed with PD were also diagnosed with CAD.[2]

MULTIPROFESSIONAL TEAM IN THE EMERGENCY TO DEAL WITH PANIC

Acting in an emergency unit implies dealing with a number of challenges on a daily basis, such as encountering the sudden and unknown, addressing elements that require rapid and accurate assessment, and making correct diagnoses and provide an effective intervention.[15] In addition, emergency services are "open doors" to the health system and are often the only care site for different types of demands that can go beyond organic/biological aspects to include emotional and social aspects, which are not less important.[16] Based on this, the health professional needs to be able to treat the suffering patient, in concomitance with a precise, conclusive, and rapid assessment that does not necessarily meet the demands of the patient and his/her surroundings.

This scenario tends to become complicated since the patient himself may not be able to clearly identify his/her demands and symptoms, and thus his/her report will not be enlightening; all this added to a context of anguish and urgency. The unpreparedness of the professional ends up generating different frustrations: to the patient, who ends up not feeling well treated and cared for in his needs; and to the professional himself, who is overwhelmed by a feeling of helplessness due to his/her inability to solve the presented issue. It is a limit situation and a crisis context where many misunderstandings are possible! The confrontation with the vicissitudes of life can trigger emotional releases that demonstrate the importance of caring with dignity, which considers that beyond a physical suffering, there is a true feeling of helplessness that affects all.[15]

This context may become more complex and demanding for professionals when they meet demands of a psychic nature, often overlapping with physical complaints, which requires a correct diagnosis, as well as a referral to an appropriate care. It is well known that when the organic complaint of a patient is accompanied by a psychological element, some confusion may occur. The psychic aspect can at times be perceived as disturbing noise that brings difficulties, such as the lack of clear communication generating an imprecision, which can lead the professional to a place of distress due to the difficulty in identifying the cause. Moreover, even after an appropriate diagnosis, it is not always possible to provide accurate care and support for what is presented, either due to lack of organizational structure or lack of adequate training of the team. PA exemplified this lack of a somatic-psychic separation, since the mixture between physical and emotional symptoms can confuse both the professional and the patient.

Regarding the symptomatology, the PD generates in the patient, a context of intense fear (of losing control, of going mad, of dying). This is concomitantly manifested by different physical and emotional symptoms. Chest pain is among the symptoms and can cause the patient to interpret the event as a serious cardiac problem, leading to numerous visits to emergency units, cardiological units or other medical services. In addition to the pain, other basic symptoms (palpitation, sweating, feeling of suffocation and hot flashes) of the PA are also present in heart disease and it is possible for people who suffer a PA to eagerly seek the emergency services, claiming a "heart attack".

The similar presentation and symptomatology of the condition can emerge from different configurations: patients presenting only one PA (imagined to be experiencing a cardiac condition), patients presenting a cardiac condition that can present some fear (a natural reaction to the stressful event that is occurring), or patients with an overlap of diagnoses. Therefore, it is important to know the presentation of these cases, to become familiar with the demands and to cater for those demands in order to provide an early diagnosis and intervention, and thereby reduce the possibilities of worsening and enhance the patients' psychic recovery.[17]

Certainly, the conduct in this situation is to verify the origin of the symptoms, that is, to examine and identify (or exclude) organic/cardiac aspects. In case of ambiguity regarding the cardiac origin of the symptoms, some authors have attempted to establish questionnaires to identify panic symptoms in patients who are admitted to emergency services. The results are still divergent, but some questions have shown a positive relationship, such as "Does the patient have any anxiety disorder?", "When did you notice the fastest heart rate, do you have a feeling that you are going to have a heart attack?", "Do you have the feeling that you will suffocate to death when you get nervous?". It is known that fear that is focused on the idea

that something will happen to the heart contributes to the onset of non-cardiac chest pain.[18,19]

Listening attentively to the history of the patient is extremely important as the presence of a discourse involving fear and anguish emerge in the speech of such individuals. In patients with PD, there is an increased frequency of symptoms involving cognitive distortions, such as the fear of experiencing the worst and lack of control. The strong emotional component alters and confounds the interpretations of trigger/ stimuli and their intensity and duration.[20]

Faced with these challenges, the health teams can use an algorithm[3] that relates symptoms of chest pain with possible AMI and/or pneumonia. Palpitations and tachycardia are more related to arrhythmia and hypoglycemia. On the other hand, paresthesia is more related to expansive cerebral processes and dyspnea is more related to CHF and COPD. If the tests to identify such diagnoses do not show an organic contribution, care should be taken to treat the anxiety symptoms. The suggestion is to provide guidance on the self-limiting and non-lethal nature of the crisis, to provide a calm place for the patient, to promote reassurance measures, as well as information on what is happening, to assure the patient that he is safe in that space, and that he is receiving all necessary care to preserve his life. It is important to have an individualized and, if possible, multiprofessional approach. In cases of hyperventilation, guidance should also be given. As the crisis ceases, care should be taken to communicate/clarify the situation, together with a specific referral, if necessary (prolonged crisis), to the psychiatrist.

It is important to identify attacks which are secondary to a clinical condition (hyperthyroidism, pheochromocytoma), to the use or withdrawal of substances (cocaine, alcohol, caffeine, nicotine, bronchodilator, hypnotics, sedatives), to anxiety disorders (PD), and to other psychiatric disorders. Also, the abuse of stimulants, as well as the withdrawal of central nervous system depressants, should be assessed in the anamnesis as the possible causes for the PA. If the PA cannot be better explained by any clinical condition or by the use or withdrawal of substances, a diagnostic investigation should be carried out for psychiatric disorders, with special attention on anxiety disorders. Figures 1 and 2 show suggested algorithms for diagnostic assessment.[4]

An important measure to assist in the organization and reassurance of the patient is the emergency management of PAs through information about the origin of the symptoms (coming from an anxiety attack, not having a serious clinical condition with imminent risk of death), always stressing that the crisis is really intense, very unpleasant, and causes very strong malaise. The transient nature (about 10-30 minutes long) of the attack should be mentioned and, more importantly, the patient should be instructed to breathe through the nose rather than through the mouth, with emphasis on the importance of controlling the inspiration frequency in order not to hyperventilate. In the presence of predominantly respiratory symptoms, probably related to hyperventilation, the patient is instructed to breathe with the diaphragm, sparing the use of the intercostal muscles. The patient should be encouraged to breathe slowly until the hyperventilation symptoms disappear. Some relaxation techniques can also be used. As a suggestion, instruct the patient to remain lying down, with the eyes closed, to breathe slowly and deeply, and to try to relax the entire body by imagining himself in a quiet and pleasant place. However, if the crisis is of medium to high intensity and/or persists for a prolonged period, the use of psychotropic drugs under medical supervision is advised.[4]

Communication with the patient is crucial. Despite the relief of not having a condition associated with a real risk of death, the patient still experiences a death anguish. Communicating that "the heart is well" can in some cases comfort, but if this is reported without due care, it can be wrongly perceived, since explaining that the problem has a psychiatric nature, without adequate care, can create - in the patient - a feeling that the professional is underestimating the complaint, not believing the reported symptom and even ignoring him, without offering temporary support to his suffering. It is as if the presented suffering (which is quite intense) is interpreted as insignificant.

PD requires as much care as a cardiac event and it is very important to offer guidance about what happened (to the patient and to the companion), as well as to indicate, through a referral, specific sites for these individuals to have an adequate and continuous treatment (not only during PA).

It is imperative that the team has previously identified places that can offer care to this individual, especially in institutions associated with the national health system (SUS - Sistema Único de Saúde). In this system, there is a support network, with different levels of complexity and modes of action, and the patient's needs to be kept informed. If the institution has a mental health professional, it is important that he participates in the diagnosis, intervention, and guidance on the continuity of the required care, since the PA is the exacerbation of a state of suffering (which can be latent or can manifest) and requires continued and prolonged care. Stressful situations, traumatic events, moments of crisis, ruptures and losses can occur in the patient's life and the patient can benefit from specialized and targeted care (different from what is offered in emergency units).

It should also be considered that, even if it is a cardiac condition, anxious symptoms can present concomitantly (whether they characterize an AP or not). Care should be focused on the subject and not only on the (cardiac) complaint, neglecting the psychic context - even though it is known that a cause-effect relationship can occur, that is, the heart attack generating a psychic reaction of fear and anxiety! Special consideration should be given to people who have developed a psychiatric condition due to a cardiac disease.

These elements can present differently in the subject and thus, the professionals must be competent to effectively deal with these complexities involving the person and the family. A wrong or incomplete diagnosis generates suffering in the patient, leading to chronic symptoms, limitations in the daily routine and reduction of the quality of life; in addition to causing excessive and inadequate use of health resources.

Another PD-related challenge in emergency services is to perform a differential diagnosis, associating PD with other

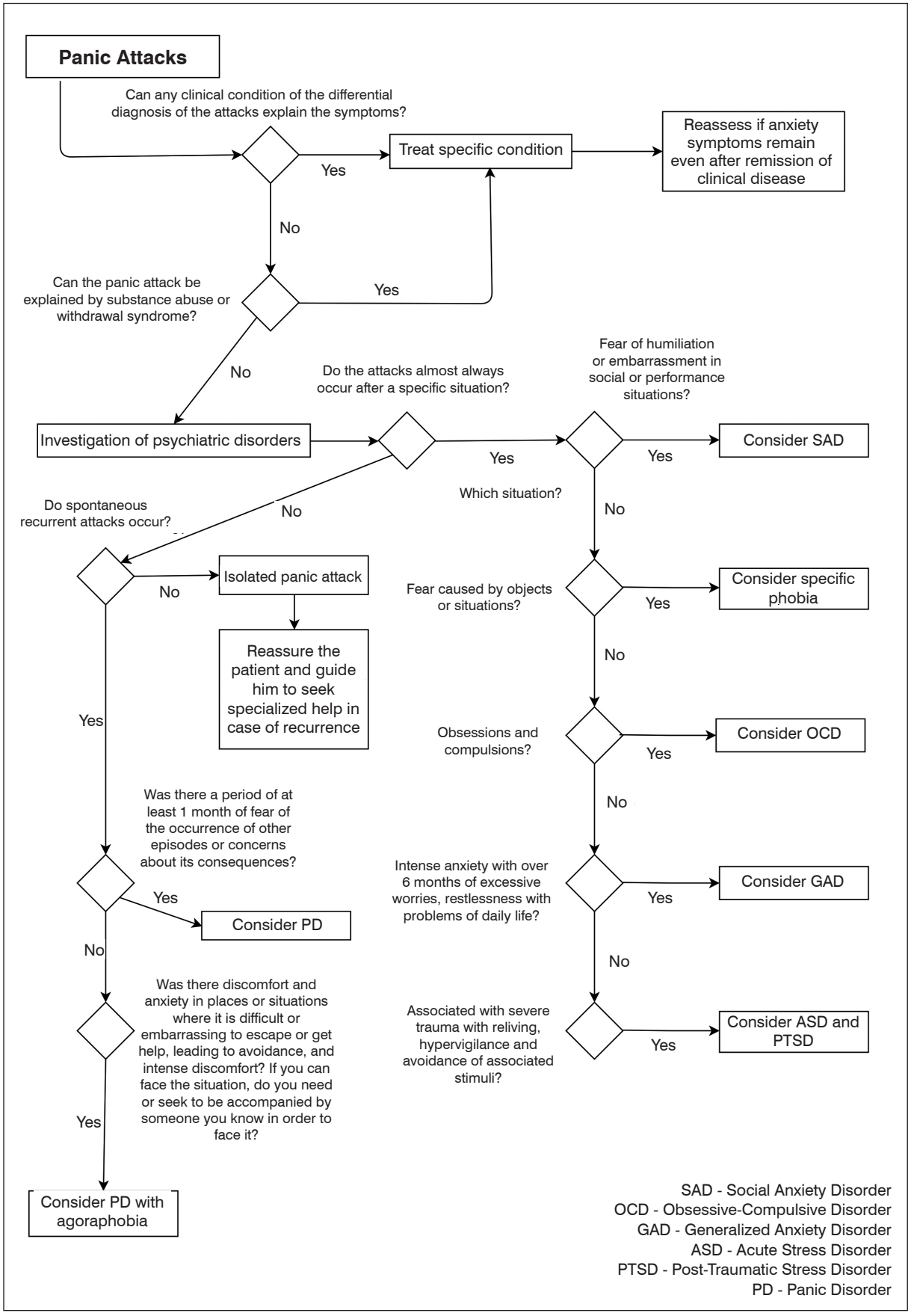

Figure 1. Algorithm for the diagnostic assessment of panic attacks.

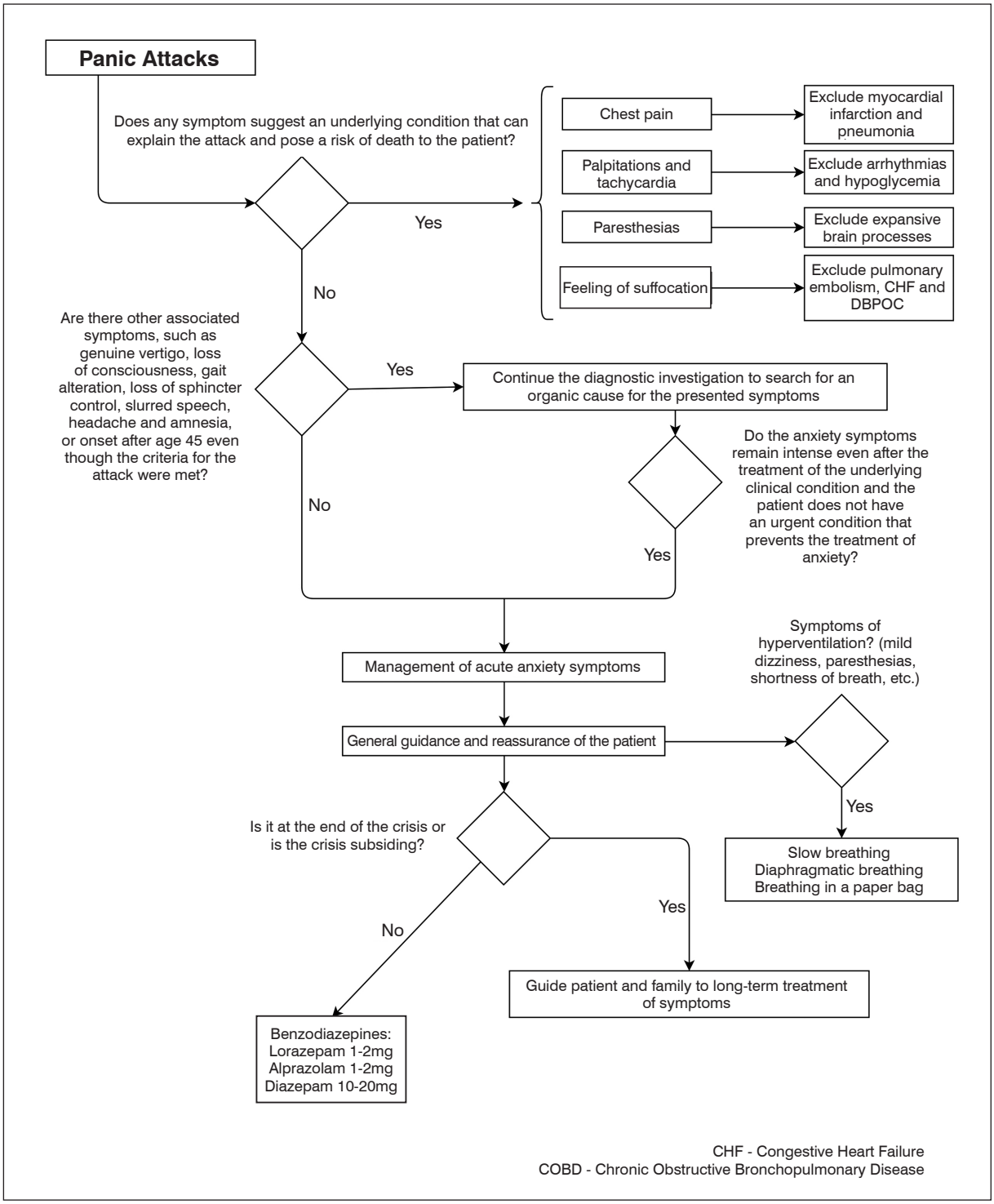

Figure 2. Algorithm for emergency management of panic attacks.

anxiety disorders, thus allowing an adequate management of the crisis (Table 1).

As previously evidenced, the set of symptoms that characterizes PD can be confused with several clinical medical conditions of an organic nature, such as diseases of the cardiovascular, neurological and endocrine system, acute pulmonary diseases, and other clinical conditions, as shown in the table below (Table 2).

FINAL CONSIDERATIONS

Chest pain is a common symptom among patients with PD, leading most of them to seek emergency services. The patient seeks to alleviate his suffering, while the attending physician seeks a diagnosis to define a treatment plan[5], which is hampered due to the existence of PA symptoms in CAD. These events show that emergency physicians, both clinicians and cardiologists, should be familiar with

Table 1. Differences between PD and other Anxiety Disorders.

Panic Disorder (PD)	Social Anxiety Disorder (SAD)	Generalized Anxiety Disorder (GAD)	Post-Traumatic Stress Disorder (PTSD)
Escape associated with fear of an attack occurring and not getting help/be able to get out. No triggers (sudden conditions)	Scape associated with fear of exposure and humiliation, in social situations (situational activators)		
Concern centered on the fear of a new panic attack. Emphasis on bodily sensations.		Concerns about everyday life situations. Continuous excess of anxiety symptoms.	
In general, there is no prior history of direct or indirect exposure to the risk situation. Spontaneous attacks, sudden, with no apparent causes, and may occur during sleep (nocturnal attacks).			A risk situation was experienced or witnessed. The memories of the event are distressing, intrusive, and recurrent. Constant hyperexcitability (insomnia, irritability, and difficulty concentrating). Avoiding thoughts, activities, places, and people that remind the patient of the traumatic event.

Brazilian Association of Psychiatry; Brazilian Academy of Neurology; Brazilian Society of Pediatrics. Panic Disorder: diagnosis. In: Brazilian Medical Association. Project Guidelines. 2012; 1-18.

Table 2. Doenças orgânicas com sintomas parecidos com o TP.

Cardiovascular system	Acute myocardial infarction
	Heart failure
	Systemic arterial hypertension
	Mitral valve prolapse
	Angina pectoris
	Atrial tachycardia
Neurological system	Temporal lobe epilepsy
	Expansive tumors
	Multiple sclerosis
	Parkinson's disease
Endocrine System	Addison's disease
	Cushing's syndrome
	Diabetes
	Hypoglycemia
	Hyperthyroidism
	Hypoparathyroidism
	Autoimmune thyroiditis
	Pheochromocytoma
	Premenstrual syndrome
	Menopause disorders
Acute pulmonary disease	Asthma
	Pulmonary embolism
	Chronic and acute obstructive diseases
Other clinical situations	Drug intoxications
	Abstinence syndromes

Brazilian Medical Association. Project Guidelines. 2012; 1-18.

PD for proper management of both rapid and differential diagnosis for cardiovascular disease. Some measures can be adopted to minimize the challenges in the differential diagnosis, such as:

- Use of screening instruments for psychiatric disorders in emergency services;
- Systematic assessment of PD in users who are admitted in emergency services with chest pain;
- Establishment of multiprofessional algorithms that include clinical assessments, tests for detection of organic alterations, and psychological, psychiatric and psychosocial assessments;
- Education and training of the emergency service team for the identification, reception, management, and referral of the PD;
- Information, guidance and education of patients and family members on PD and available treatments.

The patient should be cared for as an individual who can manifest his suffering in different ways. The symptom must be seen as an important communication tool for this subject. To care for this person is to legitimize this manifestation that something is lacking (and it makes him suffer), thus providing meaning to his own symbolized pain. Attentive listening and care legitimize a demand so that the subject himself can construct a course to give meaning to the symptom and the anguish, thereby, perceiving himself as human!

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest in conducting this study.

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