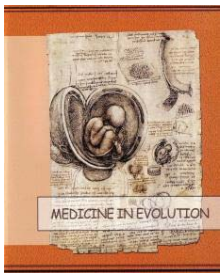
Anxiety and Panic Attacks in the Dental Office



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Abstract

The patient's anxiety about the dental act is recognized and studied a lot lately. Manifestations of patient anxiety can take different forms, ranging from simple agitation, sometimes accompanied by physiological manifestations to extreme forms of lipothymia or even myocardial infarction. Panic attacks can occur as well, as one of the manifestations of anxiety. The problem that occurs in the dentist's office is the correct and rapid diagnosis of panic attack and establishing a differentiated diagnosis with other conditions that can endanger the patient's life, such as heart attack. Also, the dentist must prevent, know and apply the treatment immediately in case of a panic attack. For these reasons we consider of the utmost importance the approach of this subject in this paper.

Keywords: panic attacks, dental office, emergency

INTRODUCTION

Anxiety can be a very common problem in everyday life. Anxiety is an emotional state characterized by a feeling of insecurity, disorder, diffusion. The term anxiety can refer to the feeling of fear or tension felt by a person, which appear as reactions to the stressful situation or a vague and unpleasant emotional state, accompanied by sometimes horror, distress and feelings of discomfort [1].

Răşcanu and Sava's suggested proposal or definition regarding anxiety, through care I see a feeling of diffuse danger, vaguely specified, with imminent repercussions, there are individual existences [2].

For P. Pichot , anxiety is an emotional state of constant worry, a phenomenological plan, based on three fundamental elements: imminent danger perception, an attitude to be realized in terms of dangerous use and a feeling of disorganization related to the consciousness of a total helplessness regarding the dangerous operation " [3].In addition to anxiously waiting for the reflection of anticipation of unfortunate events, anxiety is accompanied by muscle tension, motor inhibition and, above all, by neurovegetative manifestations, among the cares include: palpitations in repair, without dizziness or fainting, excessive sweating, redness or pallor, dry mouth, feeling of emptiness in the stomach, nausea, limited need for urination [4,5].

Some people experience anxiety as a concern about their own ability to cope with threats, which they perceive as imminent. They can become hypervigilant, thus increasing the level of activation of the nervous system, and thus, the attention paid to the negative valence of environmental stimuli.

Martin (1961) proposes that anxiety reactions be seen as a set of complex neurophysiological responses that must be differentiated, conceptually and operationally, from internal or external stimuli that provoke these responses [5]. Thus, the author emphasizes the importance of identifying and measuring patterns of behavioral and physiological responses associated with anxiety and differentiating between anxiety and other emotional reactions.

S. Freud is, without a doubt, the one who made the most important contribution to understanding the phenomenon of anxiety. Freud says that anxiety does not need a description, everyone has experienced, at some point, this sensation or, rather, this affective condition. Freud defines anxiety as "something felt", an affective state or a fundamentally unpleasant condition [6]. The experiential qualities associated with anxiety, which give it the character of "unpleasant", consist in feelings of apprehension and tension. The physiological and behavioral phenomena that accompany anxiety are essential components of anxiety.

Anxiety is, in Freud's view, a unique combination of unpleasant feelings and thoughts, physiological changes associated with the activation of the nervous system. The physiological changes are similar to those that Darwin associates with fear: accelerated heartbeat, sweating, muscle tension, disturbed breathing. Freud showed little interest in them, considering that feelings of apprehension, tension, and subjective qualities make anxiety unpleasant. Using introspective methods of psychoanalysis, the author tried to discover the historical element of the patient's childhood, which makes the connection between the anxious reactions and the external stressor that evokes them. Finally, he defines the concept of anxiety as an emotional reaction that serves as a signal that indicates the presence of a dangerous situation [7].

In the context of the theory of danger signaling, Freud distinguishes between objective anxiety and neurotic anxiety, a distinction based on the source of danger, a source that may be external to the individual or resulting from repressed impulses of the individual himself [6]. Objective anxiety is triggered when a real danger from the outside world is perceived by the individual as threatening. An essential feature of objective anxiety is that the intensity of the emotional reaction is proportional to the magnitude of the external danger.

Fear is an often unconsciou emotion. It is the emotion specific to danger or the perception of danger. Fear has a great psychological impact: the heartbeat and breathing rate accelerate, the muscles contract and the hands tremble and are cold. [8] Fear refers to an innate, almost biological-based alarm response to a dangerous or life-threatening situation. Anxiety, in contrast, is a more future-oriented and global concern – it is sometimes referred to as panic attacks.

ANXIETY IN DENTAL OFFICE

The fear of the dentist is nothing but an immediate reaction of the patient to what he considers to be a danger, a direct threat. Fear and anxiety can make a person more difficult to treat. Trying to explain the direct causes of dental anxiety, several authors have concluded that, in addition to previous psychotraumatic experience - sometimes even in childhood - in connection with the first visits to the dentist or information contagion from other people (family, acquaintances), There are several major factors as sources of this form of anxiety: fear of pain, anesthesia, noise, smell [9]

The patient views the dental treatment as a threat and will react according to a multitude of factors. These factors can be internal-subjective (personality, previous experience, moment factor, generalized anxiety) or external-objective (stressors from dental office). The stressors that trigger anxiety in the dental office can be: Psychological (pain, fear of contact with a disease, invasion of the intimate space, uncertainty, the presence of companions, certain keywords - needle, injection, blood) and physical (noise, smell, light, color, dust, sight of instruments). [10]

In the dental office there are a series of reactions, coping mechanisms in front of stressors. One of Murphy's laws says that "Under stress, most people choose, from several options, the worst." The most common behavioral reactions encountered in the dental office are: talks a lot, nervous, discontinue treatment frequently, shaking, squeeze the chair or fists, stands up ,closes his/her eyes, orbicularis contraction, raises hand, follows the doctor's movements, avoidance movements, nausea, hitting , crying, panic attack, passing out [11].

PANIC ATTACK

From biological theories, there is a genetic predisposition and disturbance in the functioning of certain neurotransmitter systems in the brain (noradrenergic, serotonergic, dopaminergic, GABA). During panic attack an excessive vegetative reaction, with an increased tonus of sympathetic system is present, and also with increased catecholamine release [12]. Psychological theories speak of separation fears, the austerity of the release of sexual energy, the traumatized trauma, various misconceptions, or irrational thoughts, etc Several studies have shown that the risk of PD is eight times higher in those with first-degree relatives with PD compared to those with no family history [13].

Panic attacks often strike without warning, often without a clear trigger, and can occur when the person is relaxed or even asleep. Panic attacks are common. A panic attack can be a one-off, but usually many people experience repeated episodes over a longer period of life. Among people who have ever had a BP, most have had recurrent BP (66.5, ie 0.5%). Most people recover without treatment. Sometimes recurrent panic attacks are often triggered by a specific situation, in which the person felt in danger before. A panic attack can also occur as part of another disorder, such as panic disorder, social phobia or depression. Patients who experience repeated panic attacks are diagnosed with "panic disorder." [14]

Depending on the relationship between the onset of the attack and the absence or presence of situational triggers, panic attacks can be divided into the following: unexpected (tested) panic attacks in which the occurrence of a panic attack is not related to a situation trigger (occurs spontaneously as a flash) and is the most common type of attack and panic

attack that occurs almost invariably immediately after exposure or anticipation of a triggering situation (e.g., seeing a snake or dog always triggers a panic attack immediately). However, they are not inextricably linked to the trigger and do not need to appear immediately after exposure (for example, a patient who has a panic attack after the extraction is completed, before leaving the office) [15]. There may also be night attacks that are not the subject of this article [16].

Panic attacks are terrible and often confused with medical emergencies. Once medical causes are ruled out, the role of the psychiatrist is to contain the patient's anxiety and provide psychoeducation. Panic attacks can be unique, recurring events or indicate severity in another anxiety disorder.

The panic attack is an emergency in the dental office due to the need for a quick and correct diagnosis. Although it does not endanger the patient's life and in most cases it resolves spontaneously, if the wrong diagnosis of a panic attack is made. endangers the patient's life.

The signs and symptoms of a panic attack may include : hyperventilation, heart racing, chest pain, and trembling, sweating, and dizziness, with a fear of losing control, going crazy, or dying [13]. In the dentist's office, a panic attack can be triggered before the start of treatment, during treatment or after its completion. Many people with panic attacks may have difficulty breathing, sweat profusely, tremble, and feel their hearts pounding. Some people will also experience chest pain and a feeling of detachment from reality or themselves during a panic attack, so they make think they're having a heart attack. Others have reported feeling like they are having a stroke. Panic attacks can be scary and may hit you quickly. [14].

The patient may have a panic attack from the moment he enters the office or the waiting room. In general, this is triggered by the anticipation of dental treatment, the vast majority of cases having a traumatic history related to the dental act. In the dental office, the patient is generally known to have a history in this regard and knows how to anticipate or can prevent the doctor from the fact that it is a panic attack. Most often the patient treats himself, as he does in other situations. Triggers can be anticipation of treatment, the smell in the office, the noise of the equipment, the presence of certain attendants or other patients in the waiting room. During treatment, the triggering factor can be, against the background of the patient's anxiety, any stress factor in the office from those mentioned above. Some patients manage to manage anxiety during treatment and in the end, on the background of relaxation when they get out of conscious control they make that panic attack [16].

The diagnostic criteria - according to DSM IV TR for a panic attack are [17]:

- a distinct period of intense fear or discomfort, in which four (or more) of the following symptoms appear suddenly and reach maximum intensity within up to 10 minutes;
- palpitations, strong heartbeat or accelerated pulse;
- sweating;
- tremors or trembling of the whole body;
- feeling short of breath or suffocation;
- feeling suffocated;
- chest pain or discomfort;
- nausea or abdominal discomfort;
- sensation of dizziness, instability, "light head" or fainting;
- derealization (feelings of unreality) or depersonalization (detachment from one's self);
- fear of losing control or going crazy;
- fear that he will die;
- paresthesias (numbness or stinging sensations);
- waves of cold or heat.

Not all panic attacks meet these criteria; there are also cases without obvious respiratory manifestations, in which the cardiac ones predominate

Diferential Diagnosys is done with:

- Somatic diseases: heart disease (myocardial infarction, mitral valve prolapse, paroxysmal tachycardia, congestive heart failure, hypertension), endocrine disease (thyrotoxicosis, Addison's disease, Cushing's disease), pheochromocytoma, lung disease (embolism, asthma) with neurological diseases (cerebrovascular, embolism, TIA, Wilson's disease), with other diseases (premenstrual syndrome, temporal arteritis, uremia, systemic infections, SLE, electrolyte disorders, heavy metal poisoning);
- Mental disorders: simulation, false disorders, hypochondriac disorder, schizophrenia, social / specific phobias, post-traumatic stress disorder, depression [18].

The differential diagnosis must be made quickly, in general the patient knows that it is a panic attack and he inform the doctor. If it is the first experience or if the patient's condition deteriorates, the help of an ambulance is requested.

Treatment

- Preventing

Prevention of a panic attack can be done by a correct anamnesis with the identification of patients likely to develop such a reaction. It is also very important to communicate with the patient, identify factors that could trigger the reaction and adapt as much as possible to treatment or treatment approach accordingly**.**

- Emergency treatment [15]:
  - Recongnise the panic attack
  - Deep breathing - While hyperventilating is a symptom of panic attacks that can increase fear, deep breathing can reduce symptoms. Focus on taking deep breaths in and out through the mouth, feeling the air slowly fill chest and belly and then slowly leave them again. Breathe in for a count of four, hold for a second, and then breathe out for a count of four. The patient may be allowed to breathe in a bag.
  - To reduce the stimulus, close your eyes during your panic attack. This can block out any extra stimuli and make it easier to focus on your breathing.
  - Find a focus object, distraction
  - Use muscle relaxation techniques-Think of a nice place [14]

Treatment of panic disorder should in no way be limited to providing first aid during panic attacks (usually by injection of diazepam intramuscularly as an emergency) without planning a targeted and ongoing treatment. The main treatment options are psychotherapy and medications. Combination of them is considered as the most effective treatment [19] Antidepressants acting on the serotonergic system—citalopram, fluvoxamine, fluoxetine, paroxetine, sertraline, the SNRIs venlafaxine and duloxetine, and the TCAs imipramine and clomipramine are effective in treating acute phase of panic disorder [20].

Cognitive-behavioral therapy involves teaching patients to recognize their distorted thinking. The goal is to clarify the patient’s misinterpretation of the physical symptoms of panic attacks and act on avoiding behavior by gradually exposing the situations that led to the attack.

Useful relaxation exercises as well as regular breathing exercises, with moderate physical activity, are also useful [21-24].

CONCLUSIONS

Analyzing the above we can draw the following conclusions:

1. Panic attacks do not endanger the patient's life but can be an emergency in terms of establishing the correct diagnosis

2. There are many pathologies with which the differential diagnosis is made, the most common of which is myocardial infarction.

3. In general, the patient knows that it is a panic attack and communicates this to the doctor. In this case, an attempt is made to adapt the treatment to the patient's psychological needs.

4. If it is determined that it is a panic attack, emergency treatment consists of stopping treatment, advising the patient to regulate breathing, distraction, trying to calm him down without minimizing or mocking the patient's symptoms.

5. If there are suspicions related to the diagnosis or the patient's condition does not evolve favorably, call the ambulance services.

6. The treatment is recommended to be done by the psychiatryst, the patient is advised to follow the treatment recommended by him.

REFERENCES

1. Robu V, Psihologia anxietății față de testări şi examene. Repere teoretice şi aplicații. Iaşi: Editura Performantica, 2011, 322-323
2. Iamandescu IB, Psihologie medicală, Ed. InfoMedica, Bucureşti, 2005, 125-129
3. Răşcanu R., Psihologia sănătății: de la credințe şi explicații la sisteme de promovare a ei. În M. Zlate (coord.). Psihologia la răspântia mileniilor., Iaşi: Editura Polirom, 2001,111-124
4. World Health Organization. ICD-10 classifications of mental and behavioural disorder: Clinical descriptions and diagnostic guidelines. Geneva: World Health Organization; 1992, 121-130
5. Stora JB, Stresul, Ed. Meridiane, Bucureşti, 1999, 144-145
6. Sarason, I. G. (1978). The Test Anxiety Scale: concept and research. În C. D. Spielberger & I. G. Sarason (Eds.). Stress and anxiety (Vol. 5, pp. 193-216). Washington, D. C.: Hemisphere Publishing Corp.
7. Bonewski D., Naumovska A., Panic Attacks and Panic Disorder, In book: Psychopathology - An International and Interdisciplinary Perspective,2020
8. T. Newton, K. Asimakopoulou, B. Daly, S. Scambler & S. Scott, The management of dental anxiety: time for a sense of proportion? British Dental Journal 213, 271 - 274 (2012)
9. Paraschiv C, Esanu I, Barbu RM, Anxiety and panic disorders in the dental office, Buletin de Psihiatrie Integrativa,2019, No. 4 (83) /141-145
10. Appukuttan D– Strategies to manage patients with dental anxiety and dental phobia: literature review Clinical, Cosmetic and Investigational Dentistry, 2016, 8:35-50
11. Amy B. Locke, Nell Kirst, Cameron G. Shultz - Diagnosis and Management of Generalized Anxiety Disorder and Panic Disorder in Adults Am Fam Physician. 2015. 1;91(9):617-624.
12. Dresler T et al. Revise the revised? New dimensions of the neuroanatomical hypothesis of panic disorder. Journal of Neural Transmission (Vienna). 2013; 120:3-29
13. Thwaites N, Panick attacs, In book: Psychiatry: Breaking the ICE: Introductions, Common Tasks and Emergencies for Trainees,2015,1447-1450
14. Hill, K. T., & Wigfield, A. (1984). Test anxiety: a major educational problem and what can be done about it. The Elementary School Journal, 85 (1), 105-126.
15. Ronad S, Preventing panic attacks, Nurse Care Open Acces J. 2019;6(5):155–156.
16. T. Newton, K. Asimakopoulou, B. Daly, S. Scambler & S. Scott, The management of dental anxiety: time for a sense of proportion? British Dental Journal 213, 271 - 274 (2012)
17. Fresco, D. M., Heimberg, R. G., Mennin, D. S., & Turk, C. L. (2002). Confirmatory factor analysis of the Penn State Worry Questionnaire. Behaviour Research and Therapy, 40, 313-323.
18. APA. Diagnostic and Statistical Manual of Mental Disorders. 3rd ed. Washington, DC: APA; 1987, 1135-1137
19. Hoge EA, Ivkovic A, Fricchione GL. Generalized anxiety disorder: diagnosis and treatment. BMJ. 2012; 345: e7500
20. Appukuttan D– Strategies to manage patients with dental anxiety and dental phobia: literature review Clinical, Cosmetic and Investigational Dentistry, 2016, 8:35-50
21. Podariu, A.S., Podariu, A.C., Popovici, R.A. (2017). Communication Strategy on Oral Health Education for Adolescents. Revista de Cercetare si Interventie Sociala, 58, 68-80.

22. Ramona Amina Popovici, Doina Onisei, Mihaela Codrina Levai, Angela Codruta Podariu, ”Legislation and management in the dental office”, Medicine in Evolution, vol XXI, nr.3, 2015, p 561-565;
23. Mihaela Codrina Levai, Angela Codruța Podariu, Ramona Amina Popovici, “The principles of basic medical attendance keys for the development of the health system management”, Medicine in Evolution, vol XXI, nr.3, 2015, p 359-.364;
24. Popovici, R.A., Podariu, A.C., Anculia, R.C., Serafin, A.C., Tigmeanu, C.V., Krems, C.D., Levai, M.C. (2017). Accessibility to Dental Health Care: Risk Factor in Oral Health at Rural Area Community. Revista de Cercetare si Interventie Sociala, 59, 48-61.