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Diagnostic Methodology and Prevention in Internal Medicine and Common Neurobehavior: Target of Prevention of Cardiovascular Events and Metabolic Syndrome

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1. Introduction

Cardiovascular disease (CVD) continues to be the leading cause of global morbidity and mortality, which is fundamental to the ongoing need to identify new targets and complementary instruments for the prevention of new cardiovascular events (CVE)[1-3].

Over the past five years, the pooling of multiple data from large studies has accelerated progress in research on stress as a risk and prognostic factor for cardiovascular disease[1-4].

Currently, many studies of Adverse Childhood Experiences (CAE) and post-traumatic stress disorder (PTSD) in childhood have shown correlations in presenting and/or increasing the risk of multiple chronic conditions in adulthood, such as obesity, chemical dependence, immunoinflammatory diseases and even neoplasms[1-7].

Compared with childhood stress and the classic risk factors of adulthood, such as smoking, obesity, systemic arterial hypertension (SAH), dyslipidemia, and diabetes mellitus (DM), the harmful effects of stress in adulthood are generally less pronounced months[1-8]. However, it is a diagnostic determinant, as a trigger in many cases of CVE, in the presence of a high burden of atherosclerotic plaque triggering cerebrovascular accident (CVA) and acute myocardium infarction (AMI) [1-8].

Several mechanistic studies have corroborated previous laboratory observations of pathophysiological changes related to stress and Sd X, which are associated with the unfolding of the CVE, such as reduction of the arrhythmic threshold, increased activation Cortisol elevation, which cause sudden increases in blood pressure, and pro-inflammatory and pro-coagulant responses[4-8].

Some metabolic and inflammatory syndromes and disorders present correlations of common factors, which potentiate their pathophysiologys in Sd X, Polycystic Ovary Syndrome and Z Syndrome, the latter being referred to in association from obstructive sleep apnea (AOS) to metabolic syndrome[6-8].

AOS is defined as a sleep disorder characterized by recurrent episodes of narrowing or collapse of the airways and pharyngeal during sleep, despite continuous respiratory efforts, and has also been shown to be a risk factor for cardiovascular consequences. Itis usually found in association with various components of Sd X[6-8].

Sd Z is little studied, it began in the late 90's, and was named by Wilcox, et al. The association of AOS risk factors with cardiovascular consequences is well established, as central obesity is a risk factor for both conditions. In the review by Carneiro, et al. they provided evidence that OSA is an independent risk factor for obesity, glucose intolerance, and insulin resistance[6-10].

The mechanisms implicated in Sd Z result from the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis, activation of pro-inflammatory factors such as IL-6 and TNF-α; and decreased adiponectin levels mediated mainly by intermittent hypoxemia related to apneas[6-11].

Common mental health disorders, such as depression and anxiety, and especially chronic stress, are highly prevalent and have a clear correlation with risk factors for CAD, since smoking is a psychiatric disease, and in many cases of cancer, the psychological factor is predominant and is the cause of refractoriness, in the treatment of bariatric surgeries and clinical treatments[6-12].

2. ZX Syndrome and Neuropsychological Component

Understanding the grouping of risk factors is of fundamental clinical importance in order to avoid underestimation of severity and for risk stratification of CVE. Although some guidelines already use stress as a prevention target for people at high risk of CVE or in known cardiovascular disease. Each component of the syndrome has significant effects on the cardiovascular system, so it is important to treat each individual component to reduce morbidity and mortality[10-13].

In 2022, a description with the same term of Syndrome Z was published for the first time in a case report, to a clinical picture of NCCC (with only four neuro dysfunctions at the time), which has a causal link to substance use disorders, and other addictions, being secondary to the in some situations and/or simultaneous in others. In this case, the Z lens is referred to due to the zigzag format, which is observed in people with a clinical diagnosis, in three family generations, in the application of dialectical family neurobehavioral assessment[13-16].

Although acquired mutations have historically been a focus of genomics in several chronic diseases, recent technological advances in phenotypic traits and regions of the Genome (GWAS), Blum, et al, with the fundamental development of Reward System Dysfunction Syndrome (RDS), and its various discoveries of polymorphisms of reward genes and addictions[3-8].

Currently, many clinical investigations of genetics and cardiovascular disease focus on inherited genetic mutations, with little effective observation of the interactions between genes and the environment. When we focus on the environment, the neurobehavioral factor can be pathological due to the premise of being a triggering factor of refractoriness in some chronic diseases, especially when there is associated stress[13-16].

The basic dissection that can be performed clinically, individualizing the neuroadaptation behaviors, which are all predominantly tonsillar in the family environment, is the same as in the professional environment, with the association of activation of the same tonsillar neuron system and mirror neurons, and Therefore, real situations of subtle stress are at work[17-23].

In behavioral and cognitive psychology, Young specifically described them as Family Schemas, and we perform clinical construction, analogous to Professional Schemas, when the same neuro activations occur in an individual and a professional (family role), and then clinically express the same pictures of toxic and pathological neuro behaviors producing irrational behaviors, but which in clinical fact have the background of Family Schema, or NAA[17-24].

3. Clinical-Neurological Development

A Neurological Dysfunction common to all human brains, which presents behavioral, cognitive and epigenetic effects, clinically evidences the quality of a human relationship, is the bio behavior of Family Synchrony, in which genes and disorders of Oxytocin, Vasopressin, Melatonin and Cortisol were detected, which are associated with it bio behavior of Family Synchrony and functional deficits of parenting and the Newborn (NB)[21-29].

In addition to the fundamental role of uterine contraction and milk ejection, oxytocin participates in cardiovascular effects. The most well-known effects are the reduction of blood pressure (caused by natriuresis and release of atrial natriuretic peptides), negative inotropic and chronotropic effect due to parasympathetic neuromodulation, anti-stress effect and vasodilation mediated by activation of the nitric oxide pathway[23-33].

The cases of hypertensive crises, and the acute and chronic complications caused by stress, whose pathophysiology is the cortisol disorder, are classic, and there are many neuropsychological cases of stress that complicates with cardiovascular events, such as cerebrovascular accident without detectable primary cause, and instability In the case of atherosclerotic plaques, in which Interleukin-6 (IL-6) is an active product both in stress and in plaque events, we must not forget that IL-6 acts on a different anatomical site, even if it has not been produced in the same anatomical region in which there is an EVC[24-37]. Post-traumatic stress disorder (PTSD) is a maladaptive and debilitating psychiatric disorder characterized by re-experience, avoidance, disturbances of emotional oscillations, especially in relation to fear, with distortions of negative thoughts, and central and peripheral neuronal hyperarousal, in the following months and even years , after exposure to severe trauma, and similar in the affected mechanism with loss and bereavement[24-37].

The risk of developing PTSD due to the influence of hereditary genes is up to 40%, and the risk after severe trauma is determined by several factors, such as the presence of Adverse Childhood Experiences (AA), the presence of tonsillar neuroadaptations (NAA), and a history of Subclinical Parental Neglect (SPN) , and we may suspect PTSD or SPL in the identification of ONCs[24-37].

Alarge amount of evidence suggests that PTSD is a disorder that is associated with dysregulation of neurobiological fear disorders. The neural circuit underlying the behavior and learning related to fear and threat, is the prefrontal cortex system, with interference and maintenance of the immune system. behavioral and translational neuroscience[32-43].

We hypothesize that we observe in the clinical practical environment, combined with the new findings of post-Covid-19 neurobiology studies, on themes of fear and family disaffection, that the initial dysfunction is the DNAF and triggers in response to all ONC, which are hormonal, genetic, and epigenetic, neuro inflammatory disorders , NAA dysfunctions during child development, which initially occur in the family environment and produce NCCC in the specific environments of the family and professional environments[41-49].

In the gestational phase, some maternal disorders and complications of childbirth may contribute as aggravating factors, associated with the sum of specific factors in childhood, such as AEI and PTSD, because they have the same neuro pathophysiology with clinical expression of causal link[41-49].

1. NFDNA due to the absence of neuro maturation, caused by the absence of stimulation from the biological parents.
2. Behaviors of NAA, which participates in the biological regulation of fear, through the tonsillar and limbic neurological systems (clinically observed by YOUNG's Family Schemas);
3. Pituitary axis dysfunction with disorders of Cortisol, Vasopressin, and Melatonin, which are responsible for the clinical changes in stress.
4. Dysfunction of family roles related to psychodynamics, with inversion, excess or absence of function of roles in the family system, which simultaneously reproduce the reality of family asynchrony inherited from parents, through mirror neurons and schema activation;
5. Dysfunctions of dopaminergic receptors specific to Reward System Dysfunction Syndrome (RDS) and their influencing genes described by Blum, et al.
6. Hypodopaminergic status oscillatory, chronic due to dysfunction of the primitive neurodopaminergic system SEEKING, which presents momentary symptoms, triggered by causal and aggravating factors such as loss, grief, EAI, PTSD and stress situations (Covid-19 for example)
7. Simultanagnosia secondary to hostile caregiver behaviors, caused by neuronal commissurotomy in the uncinate fasciculus.
8. States of Emotional Reactivity such as Alexithymia and Anosognosia secondary to pathological activated neurobehaviors, such as family schemas, automatisms, fear and stress.

Updating the clinical classification, individualizing the current RDS, which is previous in the sense of hierarchical etiopathogenesis to ADHD and ASD, presenting differencesin clinical, genetic, and neuro pathophysiology. There are three segments of different pharmacological targets, therapies with different approaches, different evolution, although very similar[41-49].

NAA produces secondary ***simultanagnosia*** in childhood (inability to identify more than four objects in the same second) due to neuronal disconnection in the uncinate fascicle, caused by dysfunctional behavior of the parents in the child, mainly by psychological abuse carried out with verbal acts ***alexithymia*** (inability to identify effective self-observation)**,** ***Anosognosia*** (inability to observe others effectively)[41-49].

In the ZXSY Stakehold Diagnostic Methodology, the clinical presence of the set of eight (eighth) common neurodysfunctions (ONCs) is used as the initial and central connector), because they express typical reductionist NCCC, with a causal link to the clinical stress and fear, in addition to presenting common biological factors studied by Precision Medicine. The letter Z is used for ONCs, X for Metabolic SD, Y for associated psychiatric disorders and the letter S for associated immunoinflammatory diseases such as up too sclerosis, dermatitis and others[41-49].

4. Objective

The functional objective of this mini-review is to briefly bring to light an empirical finding of a new diagnostic construction to help other professionals, in which we did not present the initial objective of conducting scientific studies. After the finding of Sd Z or ONC in the practical field of addictions, the same patients with smoking addiction and obesity were identified.

5. Methodology

This study has ethnographic methodology drawn from the cardiovascular clinical environment and from the psychiatry of addictions, in which the clinical descriptions of pathological neuro behaviors, which were allied to the theories of behavioral and cognitive psychology, family neuro psychodynamics, schema therapy, dialectical behavioral therapy, Beck's cognitive therapy, and Freud's psychoanalytic technique.

The review of studies was selected for the convenience of several articles in the digital libraries PubMed, Way os Science, Scielo, where we captured 3221 scientific articles, and 2,299 articles were excluded, for example. did not present clinical data on neuro behavior and neuro genetics, totaling 112 articles, initiated in the period from December 10, February 20, 20 to 30, 2023.

We used the terms attachment, parental neglect, PTSD, dopamine, neurobiology, addictions, obesity, EAI, and for convenience the studies by Blum, et al. on RDS.

The self-comparison without judgment is technical and sequential, initially evaluating the behaviors that predominate the objective factor of the brain, to the psychological factor, because only in this way was it possible to individualize the methodology of neuro-reductionist clinical evaluation in the family environment, in which the individualization of the objective (neurological) intimate component of the brain is evident. subjective (personal, intimate, essential). Initially, we classified it as dialectical family neurobehavioral assessment.

This study was not planned as the scientific tradition, but we believe it has value of paramount importance, because it is evident that we do not performs ophisms, guesswork, selective or malicious feedback bias or misinterpretation of data, because ONCs is a clinical and cognitive neurobehavioral truth, present in a large portion of the world population, and the intention is to evidence a new medical perspective, to assist the various specialists

6. Discussion

Currently, there are several concepts, terms and similar disorders that cause confusion and limitation in the medical and non-medical areas, in which the objects are a disease and a patient, and the clinical importance of such objects is varied by conceptual disorganization, alliance deficits or effective interlocution between human scientific knowledge[43-54].

By applying the common dialectical neurobehavioral assessment observing the behavioral problems of the hypodopaminergicantecedents, in the case described below in a study by Blum, et al. using the term '"Generational Family Syndrome"', it is possible to make a clinical diagnosis based on pathophysiology[3-49]:

The family consists of a mother, father, son and daughter. The mother had problems with focus, memory, anger, and

a motivational syndrome. Her father had weight problems and depression. The son experienced heavy drinking, along with some drug abuse and anxiety. The daughter experienced depression, lethargy, brain fog, trouble focusing, and anxiety, among others[3-49].

The mother presented hypo dopaminergic decompensation, and the father developed symptoms and diseases secondary to Sd Z, such as depression and obesity or Sd ZX. The daughter repeats her mother's pattern, showing an asynchronous family relationship, such as Sd Z, as the final effect[49-59].

A systematic review and meta-analysis of a study of the prevalence of Sd X in adolescents in Brazil found high heterogeneity among the studies. Kuschnir, et al. He attributed it to different eating habits and lifestyles, since these are the main factors in the genesis of obesity, in addition to representing a central component in the diagnosis, it is a disease that increases in several countries[60-72].

However, lifestyle is directly associated with the personality molded, consciously or not, at home, by the parents. And the family relationship shapes psychologically on foundations of beliefs and values, but concomitantly organically on epigenetic changes. Neuroadaptations, neuroplasticity and some authors show processes of inflammation[60-73].

The family habit is directly related to mood, relief from moments of distress, that hypo dopaminergic state, or a psychological factor is present. And the habit crystallizes into addiction, as evidenced by studies of food and sugar addictions, which is a problem for diabetics[73-77].

Recently, pre-addiction has been hypothesized for diabetes, without developmental evolution, and certainly ONC are the beginning for new studies of prevention, treatment of diabetes mellitus with emotional decompensation and obesity refractory to clinical treatment, being an important ally to the current treatments of Relapse for Obesity and Maintenance of diets negatively influenced by the emotional factor[73-77]. [Y]ears This study does not present a classic scientific clinical methodology, so the justification of little psychological rigor should not be underestimated, since syndrome Z is literally an extension of Metabolic DS, or vice versa in many clinical cases[73-77].

7. Conclusion

We ignore the fact that patients with metabolic SD should be evaluated for the presence of ONC or ZX syndrome, especially in cases of childhood obesity. In the professional spheres of mental health and pediatrics, clinical screening for Sd X is extremely important. The identification of ONCs that express NCCC in a universal way can generate protocols in several dimensions that help improve the economy, crime, domestic violence, control and prevention of chronic diseases, new pharmacological targets, acceleration of new scientific studies, public health policies, and technological and social advances[77-96].

However, longitudinal population-based studies are needed to prove the causal relationship of ONC in relation to metabolic and inflammatory disorders of Sd Z and Sd X, as well as multicenter randomized, well-controlled sampling studies considering common clustering of ONC, and confirmation of the beneficial effect of Reductionist psychotherapy[93-101].

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