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DISSOCIATION AND PSYCHOSIS AND THEIR RELATION WITH TRAUMA

Anca L Panfil¹, Ellen K. K. Jepsen², Marinela Hurmuz³, Rosana Munteanu⁴,
Cristina A Bredicean⁵, Aurel Nireştean⁶

Abstract

Although, frequently used in psychiatry, concepts like dissociation, psychosis, and trauma are hard to define. The international diagnostic classification systems, the DSM and the ICD, do not offer a consensus. Symptoms related to these disorders overlap, are often difficult to evaluate, and their history brings up more confusion. These symptoms are not only present in the general population, but also in a large palette of other disorders, and this makes the understanding of them very important

for clinical practice. Oversimplifying the diagnostic assessments and theoretical understanding may cause error. Instruments used for evaluating dissociation may bring clarification, but these instruments have their advantages and disadvantages. Often, trauma is assessed during the clinical interviews, but its role is very hard to quantify. We can say it is important to have individualized approaches.

Key words: definitions, dissociative symptoms, psychotic symptoms, assessment of dissociation

In most of the training centers for psychiatrists it is advised to assess patients for psychological trauma, and we find this practice in Romania as well. Doctors are encouraged to note patients' trauma history in their charts, but they usually do not have access to a structured training in how to assess it. This can prove to be very difficult particularly when major psychiatric disorders are present such as the ones involving psychosis and dissociation.

CONCEPTUAL CLARIFICATIONS

Although the term psychological trauma is a familiar one, an attempt to define it proves difficult, and often it is incorrectly used in a vast spectrum of events.

The Diagnostic Statistical Manual of Mental Disorders, Third edition (DSM-III) (1), presented a vague definition that was criticized because it introduced the frequency factor (2) – traumatic events were considered rare, “outside the range of such common experiences” (1), which proved not to be true. Also, the magnitude of the event was introduced – “The stressor producing this syndrome would evoke significant symptoms of distress in most people” (1) - but this is very hard to measure.

“The stressor producing this syndrome would evoke significant symptoms of distress in most people, and is generally outside the range of such common experiences as simple bereavement, chronic illnesses, business losses, or marital conflict. The trauma may be experienced alone (rape or assault) or in the company of groups of people (military combat). Stressors producing this disorder include natural disasters (floods, earthquakes), accidental

man-made disasters (car accidents with serious physical injury, airplane crashes, large fires), or deliberate man-made disasters (bombing, torture, death camps). Some stressors frequently produce the disorder (e.g., torture), and others produce it only occasionally (e.g., car accidents). Frequently there is a concomitant physical component of the trauma, which may even involve direct damage to the central nervous system (e.g., malnutrition, head trauma). The disorder is apparently more severe and longer lasting when the stressor is of human design” (1).”

The Diagnostic Statistical Manual of Mental Disorders, Fourth edition (DSM-IV) (3), gives a narrower perspective on the definition than DSM-III but still maintains many of the known elements. It presents two sections for this definition. The first establishes the experience of the event, and the second establishes the response to the event.

“The person has been exposed to a traumatic event in which both of the following were present: the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others. The person's response involved intense fear, helplessness, or horror” (3).”

This split of the definition brought concern that the definition would be understood as any event that brings distress (2).

The Diagnostic Statistical Manual of Mental Disorders, Fifth edition (DSM-5) (4) defines trauma as the direct exposure to a life threatening, serious injury or

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sexual violence; or the indirect exposure by hearing the details of such event with close parties involved; or the experience of repeated or extreme exposure to aversive details of the traumatic event(s) (4).

The International Classification of Diseases, Tenth Edition (ICD-10) (5), defines trauma as:

“a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone. Predisposing factors, such as personality traits (e.g. compulsive, asthenic) or previous history of neurotic illness, may lower the threshold for the development of the syndrome or aggravate its course, but they are neither necessary nor sufficient to explain its occurrence” (5).”

This is somewhat similar to the definition of trauma in the DSM-III and it suggests that individual features contribute to the development of Posttraumatic Stress Disorder (PTSD), such as personality traits, but underlines that these are not sufficient.

An event may be traumatic by its frequency, intensity, and lack of social acceptability, as well as by the psychological consequences upon the individual, a condition that we call traumatization.

In conclusion, traumatization may be defined as a modification or a series of specific modifications caused by the inability of the individual to adapt to a very stressful event and consequently, mechanisms that serve to overcome the event, like dissociation, are generated (6).

Specific modifications can happen at all levels of the self (7), but in the most obvious way at the level of the biographic self, especially when we talk about complex, chronic traumatization. Therefore, when one experiences trauma ones biographical memory suffers from disruption and discontinuity, and the traumatic event is remembered in a totally different manner than any other life event (6). Consequently, when the traumatic event is remembered it is reexperienced, flashed back.

If we define psychological trauma in this way, we may talk about the dynamic between vulnerability and resilience.

An individual is resilient where another is not, and the same individual may for a time be vulnerable to certain types of events and resilient to others.

Psychosis is also a concept that is hard to define, generating controversy. In mental disorders, without an obvious cause (e.g., a clear biological substrate), a diagnosis is based on assessment of the psychological symptoms, and for the purpose of accuracy the diagnostic criteria must be periodically revised.

A practical way to define psychosis is by referring to the five primary psychopathological domains: hallucinations, delusion, disorganization, negative symptoms and behavioral symptoms (8).

Dissociation is another term that is hard to conceptualize (9), resulting in differences between the ICD-10 (5) and DSM-5 (4), and to a continuum of controversy even at the level of disorders' criteria. In the ICD-10, somatoform dissociative (conversion) disorders, e.g., dissociative non-epileptic seizures, are classified among the dissociative disorders, whereas they are categorized among the somatoform disorders in DSM-IV (3), and among the somatic symptom disorders in DSM-5.

We underline the difference between

conceptualizing dissociation as pathological vs. non-pathological and along a continuum from “normal” to “pathological” dissociation.

The most utilized instrument for screening for dissociation is the Dissociative Experiences Scale (DES), a self-report questionnaire developed by Bernstein and Putnam (10), which is based on the continuum-model. However, a dissociative taxon operationalized via eight items from the DES is sometimes used to identify pathological dissociation in individuals with the most severe dissociative disorders. This is known as the Dissociative Experiences Scale - taxon (DES-T) (11).

In the 19th century, Pierre Janet introduced the word dissociation to describe the connection between various psychological traumas and physical symptoms of “hysteria”. He claimed that dissociative symptoms were the result of un-integrated memories of trauma, and as such always “pathological” and that dissociation is related to mental disorders, in particular hysteria (12, 13).

Because there is much overlap of symptoms of dissociative and other mental disorders as defined by the diagnostic criteria in the DSM and the ICD, the diagnostic evaluation may be challenging (14, 15). Therefore, it is highly relevant to assess for dissociation as part of a pre-treatment assessment. Many authors consider this to be important when a patient has a trauma-history, in particular childhood trauma (7).

SYMPTOMATOLOGY

When discussing mental disorders in clinical settings, it is not uncommon to focus only on assessment of symptoms and change and following the evaluation, the condition is framed in concordance with the DSM or the ICD. Individuals with trauma-related dissociation and dissociative disorders typically present a broad spectrum of psychological symptoms, of which some have been classically described in other disorders, as the psychotic spectrum disorders.

In concordance with the diagnostic interview for DSM-IV dissociative disorders, the Structured Clinical Interview for DSM-IV Dissociative Disorders Revised (SCID-D-R) (16), five main categories of symptoms are present in dissociative disorders: amnesia, derealization, depersonalization, identity confusion, and identity alteration.

Psychotic disorders are centered around the following symptoms: hallucinations, delusions, conceptual disorganization, negative and behavioral symptoms.

Depersonalization and derealization are seen in a large variety of disorders such as anxiety disorders, but these were framed by Jasper as self-disorders and seen as psychotic symptoms (17, 18) that are present especially in the prodrome (19), but also in the evolution of a psychotic spectrum disorder (20).

These symptoms can easily lead to diagnostic difficulties such as misdiagnosis or an overlap of disorders.

Studies using the DES for the assessment of patients with schizophrenia started to investigate the relationship between dissociative experiences and specific disorder characteristics, such as, the association between schizophrenia and post traumatic stress disorder, dissociation, and trauma or the differentiation between

dissociation and schizophrenia (21). These studies showed that the level of dissociation in psychotic disorders varied with the stage in which the patient was (i.e., lower scores in the remission phase) (22, 23).

Correlations are found especially with positive, psychotic symptoms assessed with the Positive and Negative Syndrome Scale (PANSS) (24). In particular, auditory hallucinations are correlated with higher levels of dissociation (25).

Psychotic symptoms are often reported in dissociative disorders especially in more severe cases of a dissociative identity disorder (DID).

As previously mentioned, auditory hallucinations are symptoms that often are associated with dissociative symptoms and disorders. Approximately 80% of patients with DID report complex auditory hallucinations (26, 27). Some patients describe thought echo with an intrusive character that is in conflict with what the patient perceives as him or herself.

Classically, pseudo hallucinations were more often considered to be associated with dissociative disorders, but a recent suggestion is that all types of auditory hallucinations are dissociative (28). Also, visual hallucinations seem to be more frequent in dissociative disorders than in psychotic spectrum disorders.

The patient may have ongoing internal dialogues between observing and participating dissociative parts of personality or "identities" that he or she perceives to be "not me" (16), and this explains the frequency of auditory hallucinations associated with dissociation. As it is, hallucinations that cannot be directly attributed to another dissociative personality part may exist, and these are generated by the other personality parts in order to scare the patient. The same mechanism explains the existence of flash-backs in dissociative disorders that are by definition considered as hallucinatory in nature.

The patient with a psychotic disorder has, in contrast to the dissociative patients, a low ability for reality testing. This is also encountered during psychotic dissociative episodes.

Delusion is present in psychosis but determining its absence or presence during evaluation of the dissociative patient may prove difficult.

When we think of a patient suffering from dissociation, we think that he or she has a high degree of insight. This aspect may as well become an issue for discussion when the patient experiences the other dissociative personality parts, as if they are internal cohabitants or external real-life friends.

Ideo-verbal and behavioral disorganization, as well as, formal thought disorders are attributed to psychotic spectrum disorders. A dissociative patient can present these symptoms, but in reality they may reflect rapid interchanges between dissociative parts of personality or they can reflect a psychotic dissociative disorder.

With all these arguments, we may say that Schneider's model for psychotic disorders is incorrect. Schneider's first rank symptoms are well proven not to be pathognomonic for schizophrenia (29, 30, 31).

DIFFERENTIAL DIAGNOSIS

When discussing, respectively, dissociative symptoms in psychotic disorders, psychotic symptoms in dissociative disorders and psychotic dissociation (21),

how can we objectively differentiate between a psychotic and a dissociative disorder? With this dilemma in mind, a practical procedure seems to be first to exclude a dissociative disorder diagnosis when one has a patient with a constellation of both psychotic and dissociative symptoms.

The golden standard in diagnostics for dissociative disorders is the SCID-D-R (32), a semi structured interview. It systematically examines the five categories of dissociative symptoms: amnesia, depersonalization, derealization, identity confusion and identity alteration.

The advantage of the SCID-D-R is that it allows elaborated answers and it allows the clinician to come up with supplementary questions. It is an instrument with a high rate of diagnostic success (33, 34), and it can help the experienced clinician in excluding factitious disorders (35).

The disadvantage of this instrument is that it is time-consuming, sometimes requiring up to three hours to complete. Education in the administration of the interview is necessary.

The Dissociative Experiences Scale (DES) is a self-report questionnaire with 28 items measuring the frequency and types of psychoform dissociative experiences that a person may encounter in this lifetime. Scores are rated on a 0-100 scale (36). A score above 30 highly indicates a dissociative disorder (37). A person with a high DES score must be evaluated for dissociative disorder. The DES is easily applied and often utilized.

Its disadvantages are that it cannot establish a certain diagnosis and it cannot identify simulation or dissimulation of dissociation (32).

There are more variants of the DES. The DES-T (11) represent a 'dissociative taxon', a subsection of the DES items that aims to measure only pathological dissociation. At a more attentive glance this variant does not seem to bring benefit when used, as it is sensitive only to complex dissociative disorders' symptomatology and errors were detected when compared to the DES (38).

The Dissociative Disorders Interview Schedule (DDIS) is a structured interview. Most of the instrument is made up by one question per criterion from the DSM. It allows only answers of: 'yes', 'no', and 'not sure'. It does not allow a description of symptoms and it does not identify simulation or dissimulation. This interview was developed for diagnosing dissociative disorders (39).

PSYCHOLOGICAL TRAUMA

Trauma is considered by many authors as a public health concern (40). Exposure to trauma is not uncommon across the lifespan, and trauma is associated with substantial costs to the individuals, their families and surroundings, as well as society.

Exposure to trauma has a high lifetime prevalence (41), being estimated at 81% (42) amongst the general population. The way in which the individual is affected by this is very difficult to quantify. A cumulus of many factors, among which we find trauma (in particular childhood and repeated trauma), is known to contribute to the development of psychotic or dissociative disorders, as well as the development of comorbid disorders (e.g. psychotic disorders and PTSD) that are clinically hard to handle and can lead to a worse outcome.

For measuring traumatization, we can simply

estimate the frequency of disorders directly linked to a traumatic event, such as PTSD, to about 5.6% (43). As we previously mentioned, this way of thinking has proven faulty because the balance between resilience and vulnerability is dynamic, and potentially traumatizing events and other factors involved in the development of trauma-related symptoms and disorders are cumulative lifelong. For example, the presence of trauma from someone's life history earlier on can surface and become important at any time.

Many mental disorders and psychological variations were associated with trauma exposure at a certain time in development. In particular, a history of childhood trauma is frequent among patients with mood disorders, addictions, eating disorders, personality disorders, anxiety disorders, dissociative disorders and psychosis, but also in patients with non-suicidal self-destructive behavior, suicidal attempts, somatic medical illnesses, or interpersonal problems. More specific studies suggest the association between childhood trauma and certain features like suicidality (44) and auditory hallucination (45).

Although the etiologic model involving trauma as a cause for dissociative disorders started with Pierre Janet, this is still very often contested. More research in this area is needed. There are many studies showing the development of dissociation after trauma (44, 46). Furthermore, a review of 1500 studies support the link between trauma and dissociation (47), and a meta-analysis found that higher dissociation scores were significantly associated with childhood abuse and neglect, predominantly with early onset and attachment disruptions (48).

We can talk about case series with Dissociative Identity Disorder where, apparently the presence of trauma was often seen. In conclusion many authors see dissociative disorders as post traumatic (developmental) disorders (49, 50).

CONCLUSIONS

The evaluation of the psychiatric patient is complex and multifaceted. Although many clinicians will evaluate the trauma history of a patient, a proper, structured and standardized training in this area is lacking in many clinical settings. Clinicians, who aim for accurate diagnoses face great challenges because of the lack of official guidelines, as well as clinical consensus on how to assess and treat trauma-related symptoms and dissociative disorders

Dissociative, psychotic, and posttraumatic symptoms are often very difficult to differentiate because of much overlap in how they manifest in patients. Although many explanations and hypothesis exist in the literature it is currently difficult to find and reach a consensus for even an elementary level of conceptual definition. For instance, the concept of dissociation is still under debate.

Diagnostic manuals bind us to a certain way of evaluating, with clear symptomatic criteria. However, complex disorders compel us to develop a more profound knowledge of both the context and frame of the disorder as well as the cultural and historical context.

In this way part of the symptoms that were considered specific for psychotic disorders may be, in fact, more often attributed to dissociative disorders, like

auditory and visual hallucinations, depersonalization and derealization.

When a psychotic disorder has dissociative elements, assessment of dissociative disorders or comorbidity, is required for differential diagnosis in order to avoid wrong conclusions. An accurate diagnosis gives the clinicians a better basis for the treatment planning, and by following the treatment guidelines for a more accurate diagnosis, the patient may receive a more effective treatment.

The current golden standard for evaluating dissociative disorders is the SCID-D-R but it is rarely used because of the lack of training among clinicians as well as the long time needed for assessment. The DES is the most frequently used self-report instrument, but it does not lead to a diagnosis. However, if a complete diagnostic assessment for dissociative symptoms and disorders is not feasible, a screening for dissociation is relevant and appropriate.

Psychological trauma is often discussed in many contexts, and linked to dissociation and to psychosis. A consensus regarding its role is often not reached.

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INFLAMMATORY SYNDROME IN SCHIZOPHRENIA

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Abstract

A substantial amount of recent research highlighted the importance of the inflammatory syndrome in schizophrenia. Markers of inflammation mentioned as elevated in the blood of schizophrenic patients are interleukin 6, C-reactive protein and tumor necrosis factor- α . Recent studies are focused on the benefit of add-on therapy with anti-inflammatory agents in the cases

which do not reach complete recovery following conventional antipsychotic therapy. The main goal is to initiate pharmacological treatment during the early phases of the disease, in order to improve the course and the prognosis of the disease.

Key words: inflammatory syndrome, schizophrenia, inflammation markers, anti-inflammatory treatment

INTRODUCTION

Schizophrenia is an illness with heterogeneous etiology, implying long-term costs, and affects the patient, family and society (1). Since the biological mechanisms and pathways underlying risk for these disorders are still not completely identified, there are no validated, selective and specific biomarkers for this disease.

This disorder affects an estimated 250 million people across the world at some point in their life (2), and it is considered to be a disabling psychiatric disorder. Most common symptoms of schizophrenia are delusions, hallucinations, disorganized thinking and cognitive impairment.

Schizophrenia is the most looked into neuropsychiatric malady, with a progressed logical comprehension of the hereditary, environmental, molecular and physiologic contributing components (3). Be that as it may, concerning the onset and progression of the disease there is not sufficient data available; the leading cause is due to the multifaceted nature of the sickness and logistical challenges of studying psychotic symptoms in human subjects (4). The way that inflammatory markers and cytokine flagging are forerunners to psychosis was demonstrated by controlling synapse signals in animal models (5). These models show different schizophrenia-like behavior anomalies after puberty, the vast majority of which are sensitive to various antipsychotics (6). There is a vast interest for new theories concerning the etiological process of schizophrenia in human subjects, in order to establish the framework for new treatments along these lines. The explanation resides in the need for translational approaches in clinical schizophrenia investigations, as well as the difficult nature of experimental design and the clinical morbidity and mortality of the disease (7).

Suicide rates of those suffering from schizophrenia approach 5% (8). The factors with the strongest link to suicide concerning schizophrenic patients include being young and male, with a higher level of education (9), also

illness-related factors such as depressive symptoms, a history of suicide attempts, active hallucinations and delusions, the presence of insight, and comorbid chronic physical illness (10). Significant discoveries related to early identification, early treatment and stabilization with medications have led to more extensive research and a better long-term prognosis for schizophrenic patients (11). Studies have shown a striking developmental correspondence between the ontogeny of specific dopaminergic neuropathology and the postnatal onset of distinct forms of dopamine-dependent functional abnormalities implicated in schizophrenia (12); furthermore, prenatal immune activation (13) is apparently a well-recognized environmental risk factor for the expression of postnatal dopamine dysfunctions involved in the precipitation of psychosis-related behavior (14).

The link between schizophrenia and the immune system has been suggested more than a century ago (15). Prenatal infections, as well as those during pregnancy (16), also early childhood (17) and autoimmune diseases (18), have been associated with an increased risk of schizophrenia. Furthermore, findings from the largest genome-wide association study of schizophrenia to date point to the immune dysregulation playing a role in the pathogenesis of schizophrenia (19). Cytokines may influence multiple neurologic processes, such as neurotransmitter metabolism, neuroendocrine function, and neural plasticity; therefore, it is possible to correlate inflammation as a potential immune response mechanism with the pathogenesis of schizophrenia and other neuropsychiatric disorders (20, 21). Observational epidemiologic studies, mainly of cross-sectional design, indicate that circulating levels of several cytokines (22), such as interleukin (IL)-1 β and IL-6, and C-reactive protein (CRP) are elevated in individuals with schizophrenia (23, 24). Meta-analysis of randomized clinical trials suggested that anti-inflammatory drugs

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improve the symptoms of the syndrome (25), although there is need of further studying of this area. A possible starting point is the fact that elevations in two of three inflammatory cytokines, tumor necrosis factor- α and interleukin-6, were detected in the blood of schizophrenia patients compared to healthy control subjects (26).

Interleukin-6 (IL-6) is a prototypical pro-inflammatory cytokine and anti-inflammatory cytokine that enhances immunoglobulin synthesis by activated B cells (27). Dysregulated IL-6 synthesis facilitates the development of various diseases; this is due to the role it plays in the defense against infections and tissue injuries. In infectious inflammation, IL-6 is produced by monocytes and macrophages after the stimulation of Toll-like receptors (TLRs) with distinct pathogen-associated molecular patterns (28).

Recent studies have shown the ability of human recombinant IL-6 to induce gluconeogenesis, followed by hyperglycemia and compensatory hyperinsulinemia in rodent models of glucose metabolism. Similar metabolic responses have been observed in humans after administration of subcutaneous recombinant IL-6(29).

The inflammatory hypothesis of schizophrenia is supported by high levels of proinflammatory cytokines. Most studies related to schizophrenia have reported cytokine levels in peripheral blood(30), but the number of studies investigating cytokines in schizophrenic patients' CSF is still very small and these studies typically have small sample sizes(31). As a result of these studies, IL-6 and IL-8 were most often measured and reported, whereas abnormalities in other cytokines, such as TNF- α , were not reported in schizophrenia patients' CSF(32). Some studies uncovered measurably critical increases in levels of interleukin-8 (IL-8) and interleukin-1 beta (IL-1 β) in the CSF of patients with schizophrenia(33), in contrast with healthy volunteers. Other meta-analysis demonstrated statistically significant increases in interleukin-6 (IL-6) and IL-8 in patients compared to healthy volunteers(34). Furthermore, IL-6 levels were higher in patients with a first psychotic episode, rather than in long-term schizophrenic patients(35).

C-reactive protein (CRP) is a ring-shaped, pentameric protein found in blood plasma, an acute-phase protein of hepatic origin that increases following interleukin-6 secretion by macrophages and T cells (36). CRP is synthesized by the liver, consecutive to factors released by macrophages and adipocytes. The elevation of IL-6, produced by macrophages and adipocytes, followed by the rise of CRP levels, lead to the acute phase response, due to wide range of acute and chronic inflammatory conditions (37) such as bacterial, viral, or fungal infections, rheumatic and other inflammatory diseases, malignancy, as well as tissue injury and necrosis. The end point of all these events is the release of interleukin-6, triggering the synthesis of CRP and fibrinogen by the liver (38).

Multiple studies show increasing evidence for the role of the inflammation in schizophrenia, by highlighting immune alterations in subgroups of patients with schizophrenia (39). The most recent data, obtained through meta-analyses, have reported a high prevalence of elevated C-reactive protein (CRP) in schizophrenia which has been associated with acute psychosis and impaired cognition in schizophrenia (40).

Schizophrenic patients show significant neurocognitive

deficits, leading to higher deficit in daily functioning, as well as to disability. Recent reports have shown that neurocognitive dysfunction is associated with increased inflammation in this population(41). There is, however, not enough evidence to support this theory, and the possible link between inflammation and daily functioning is yet to be established. Depressive symptoms are often linked to symptoms of schizophrenia. C-Reactive protein (CRP), a marker of chronic inflammation in patients with schizophrenia and depressive symptoms, was found to be elevated(42). However, the association between CRP level and depressive symptoms in patients with schizophrenia has been poorly investigated. Many studies have been carried out to assess the association of blood CRP levels, including plasma and serum CRP(43). However, these previous association studies were carried out without taking into account the effects of genetic variants, although recent meta-analyses of genome-wide association studies of serum hs-CRP levels identified several genetic variants. The increased CRP level itself can be a causal risk factor for schizophrenia, leading to the hypothesis that associating medications that reduce CRP levels might increase positive outcomes.

The pro inflammatory immune state in schizophrenia seems to be associated with the activation of the enzyme indoleamine 2, 3-dioxygenase (IDO) of the tryptophan - kynurenine metabolism (44); the results include disturbances in the glutamatergic and dopaminergic neurotransmissions, as well as possible neurotoxic effects. This imbalance contributes to the activation of microglia cells and astrocytes. Epidemiological and clinical studies show the involvement of various infectious agents in the pathogenesis of schizophrenia (45). From the genetic point of view, recent data uncovered gene loci located in a region which includes several genes that are related to the immune function (46).

The vulnerability-stress model of schizophrenia is highlighted because stress is associated with an increased release of pro inflammatory cytokines and contributes to a pro inflammatory immune state (47). This model may clarify the inflammatory role in schizophrenic patients since stress is a well-known cause for the rise in pro-inflammatory cytokines and may also explain the chronic inflammatory status(48). Schizophrenia is portrayed by hazard genes that advance inflammation and by natural pressure variables and changes in the immune framework(49). Typical differences in dopaminergic, serotonergic, noradrenergic, and glutamatergic neurotransmission portrayed in schizophrenia have likewise been found in low-level neuroinflammation(50) and therefore might be etiological factors in developing symptoms of schizophrenia. Also, evidence that stands for the importance of a low-level neuroinflammatory process in schizophrenia is the activation of microglia(51), exhibited in neuroimaging tests. Furthermore, anti-inflammatory medications were found to benefit these patients(52), as well as the immunomodulatory effects of antipsychotics, providing arguments that sustain the role of inflammation in this enfeeble disease.

Another characteristic of the immune system, the kindling of the immune response is further evidence concerning the possible causes of the symptoms in schizophrenic patients(53). The result of immunological variants in schizophrenia stands for inflammatory state in addition to increased prostaglandin E2 (PGE2) production and

increased cyclo-oxygenase-2 (COX-2) expression(54). COX-2 inhibitors and possibly other anti-inflammatory agents seem to have favorable effects in schizophrenia, primarily during early stages of the disorder (55). A further line of evidence is the therapeutic benefit of anti-inflammatory medication. Studies have shown schizophrenia to have pleomorphic pathophysiology including abnormalities in immunological and inflammatory pathways, thus explaining why anti-inflammatory drugs have also been trialed as augmentation agents in schizophrenia. Nonsteroidal anti-inflammatory drugs added to the conventional treatment is considered a potentially useful strategy to reduce symptom severity in schizophrenic patients(56). As these are the first studies on a relatively new strategy and the included sample size is modest, these results should be interpreted with caution. However, augmentation with acetylsalicylic acid may have the additional benefit of reducing cardiac and cancer mortality in schizophrenia. We therefore believe that application of NSAIDs in schizophrenia deserves further investigation as augmentation of antipsychotic treatment and reducing comorbid somatic diseases.

CONCLUSIONS

The recent data from the literature brings to our attention the increased understanding of the microglia driven inflammatory effect on psychiatric illness. Although the causes of schizophrenia still remain unknown, studies suggest that patients could benefit from anti-inflammatory drugs as add-on therapy.

The side effect profile of anti-inflammatory agents is important when deciding to start adjunctive therapy, mainly in cases where we have not been able to reach recovery based on conventional therapy; moreover, further studies are required in order to identify the longer term effect of anti-inflammatory treatment in schizophrenia, considering that pharmacological treatment during early phases could improve the course and overall prognosis of the disease.

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MANAGEMENT OF PSYCHIATRIC-RELATED COMORBIDITIES IN PEOPLE WITH CANCER

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Abstract

Introduction: Psycho-oncology provides a comprehensive understanding of cancer patients and offers an approach to the emotional, social and spiritual distress which accompanies them.

Objectives: This study aims to estimate the prevalence of anxiety and depression, the quality of life, cognitive impairment, sleep disorders and substance dependence in cancer patients from a general Romanian hospital.

Materials & Methods: This is a prospective longitudinal study that assessed 130 patients from the radio-oncology department for three months. A number of 37 patients were reevaluated. We applied a number of eight scales for the evaluation of psychiatric comorbidities: Hospital Anxiety and Depression Scale (HADS), Quality of Life Enjoyment and Satisfaction Questionnaire (QLESQ-SF), Athens Insomnia Scale (AIS), Visual Analog Scale for Pain (VAS Pain), CAGE scale and Fagerstrom Test (for alcohol and tobacco dependence), Global Assessment of

Functioning (GAF) and Montreal Cognitive Assessment (MoCA; for cognitive impairment).

Results: As expected, depression and anxiety rated high in the study population. The quality of life is strongly correlated with the intensity of pain, depression and anxiety level. There was a high rate of alcohol and nicotine use among these oncological patients, although the majority of them stopped consume after confronting with the diagnosis. Patients with lung cancer have frequent sleep disorders.

Conclusions: To sum up, patients from oncology departments should always have access to psychiatric services due to the high prevalence of this type of disorders. Both the disease and oncological treatment influence the quality of life and can lead to anxiety and depression.

Key words: quality of life, depression, anxiety, nicotine, alcohol, insomnia, oncologic

Introduction:

It is well known that oncological patients have a high prevalence of comorbid psychiatric disorders as well as nonspecific psychological distress (1). Unfortunately, it is estimated that fewer than 50% of oncological patients with psychiatric disorders and distress are identified and referred for appropriate care. The prevalence of significant psychological distress and psychiatric comorbidities among cancer patients may reach over 80%. The mortality may be increased by the psychiatric disorders developed in cancer patients.

A meta-analysis of 8 observational studies included patients with oncological disease ($n > 1400$) who were assessed with validated instruments and found that at least one psychiatric disorder (depressive or anxiety disorder, substance use disorders - nicotine or alcohol use -, adjustment, somatic symptoms, last but not least posttraumatic stress disorder) was present in 32% (2). Another subsequent cross-sectional study of cancer patients who were evaluated ($n > 2000$) found that at least one mental disorder (depressive, anxiety, adjustment, somatic symptoms, or substance use disorders) was present in 32% (3). Recent research has indicated that not only the illness, but also the oncological therapy leads to severe depression, anxiety and distress.

This study aims to estimate the prevalence of

anxiety and depression, the quality of life, cognitive impairment, sleep disorders and substance dependence in cancer patients from a general hospital. It also describes the clinical characteristics of these patients and evaluates to what extent the different types of cancer have a significant influence on the presence and severity of a psychiatric diagnosis.

Materials & Methods:

This is a non-randomized prospective longitudinal study that evaluated a number of 130 patients in a radio-oncology department from a general hospital for three months (between June and August 2018). A number of 37 of cancer patients were reevaluated at 5 weeks. The demographic and clinical data were collected in order to identify possible protective or risk factors for psychiatric symptoms.

We applied a number of eight scales for the evaluation of psychiatric comorbidities. Six of them were based on self-assessment. Hospital Anxiety and Depression Scale (HADS) was used to determine the levels of anxiety and depression, Quality of Life Enjoyment and Satisfaction Questionnaire (QLESQ-SF) to estimated quality of life, Athens Insomnia Scale (AIS) rates sleep disorders, Visual Analog Scale for pain (VAS), CAGE scale for alcohol use and Fagerstorm Test for tobacco dependence. Another

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two scales were used by mental health clinicians to rate: social, occupational, and psychological functioning of the individual (Global Assessment of Functioning – GAF) and the cognitive impairment (Montreal Cognitive Assessment - MoCA).

The patients were diagnosed with psychiatric disorders according to International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) criteria. The collected data were introduced in OpenOffice Calc version 4.1.1 Copyright ©2014 The Apache Software Foundation database. The statistical analysis was performed with SPSS 20 (Statistical Package for the Social Sciences). For the categorical variables (gender, education, employment status) the absolute frequency and the relative frequency were estimated. On the other hand, for the interval variables (age) the central trend was determined. P-values of 0.05 or less with a confidence interval (CI) of 95% were considered statistically significant. In describing trends, the terms “increase” or “decrease” were used when the slope (APC) of the trend was statistically significant ($P < .05$).

Results:

The present study assessed 130 patients from the radio-oncology department, for three months. Gender distribution was relatively equal (52% were females, while 48% were males). According to their age, the highest density of patients was between 60 and 70 years old (Figure 1).

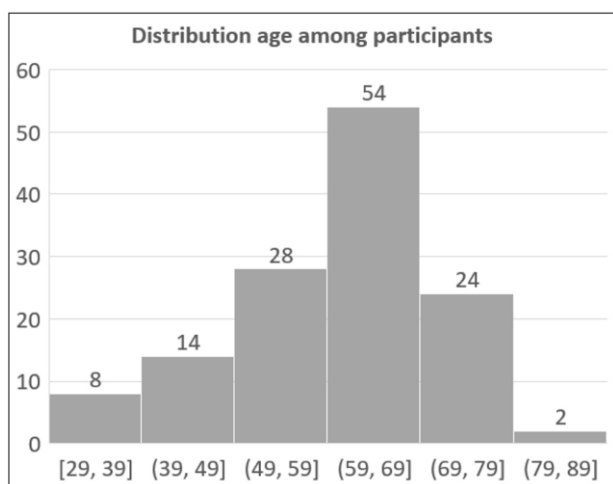


Figure 1: Age Distribution among Patients

A number of 61 patients have a medium level education, while 33 of them have a high level and 34 a low level education. Most of the patients (91) come from cities, while 39 of them come from the rural area. The most frequent localizations of the cancer were: head and neck, lung and breast (Table 1). Most of the patients were evaluated in the fourth stage of cancer, while very few in the first and second stage (stage IV-60%, stage III-31%, stage II-8%, stage I-1%).

We initially expected the cancer stage to be a good predictor for the risk of psychiatric disorders. After the results were analyzed, they did not meet the expectation.

In the studied population advanced stage of the cancer was not correlated with depression and/or anxiety, which were evaluated with the Hospital Anxiety and

Depression Scale (Figure 2).

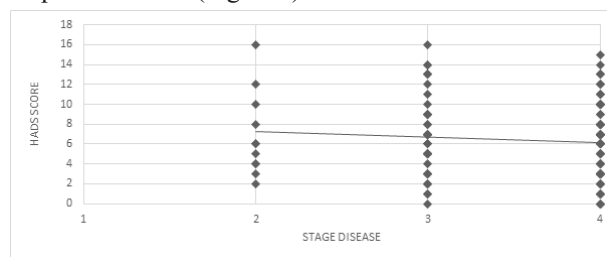


Figure 2: Correlation between Cancer Stage and HADS Score

Cancer type	Cancer Incidence Localization (ber patient)
ENT	34
LUNG	21
BRAST	19
COLLECTAL	17
UTERINE	11
OVARY	11
GASTRIC	4
RENAL	3
GALLBLADDE	2
UNKNOWN	2
OTHERS	6

Table 1: Cancer Incidence and Localization

In our study advanced stage of the disease does not necessarily correlate with the level of anxiety or depression.

All the patients had to complete a visual analytic scale (VAS) for assessing pain and almost half of them indicated a level of pain between 4 and 6. It is interesting to mention that 24 patients indicated a score of zero points of pain level. The aim was to correlate the pain level (measured with VAS) with psychiatric comorbidities. As expected, the level of pain was strongly correlated with them. The scatter diagram from Figure 3 indicates the pain level is strongly correlated with anxiety, and the level of pain seems to be a good predictor for anxiety. A similar result was obtained when depression and the level of pain were correlated (Figure 4).

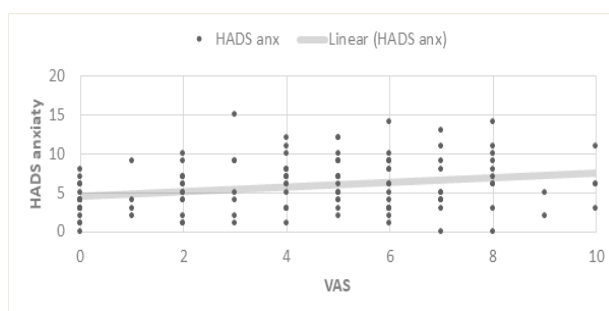


Figure 3: Pain Score based on the Individual's Anxiety, $p < 0.003$

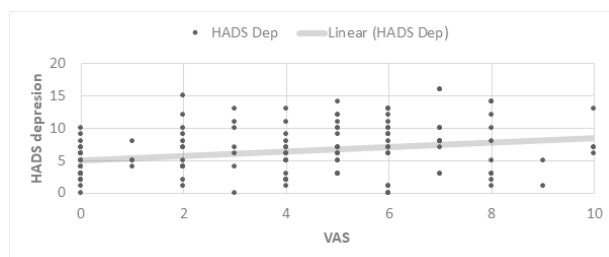


Figure 4: Pain Score based on the Individual's Depression, $p < 0.003$

Both anxiety and depression were evaluated with the Hospital Anxiety and Depression Scale. In conclusion, the pain level in oncological patients from the cohort study leads to high risk of anxiety and depression.

The patients also completed a quality of life questionnaire (Quality of Life Enjoyment and Satisfaction Questionnaire) and the results were correlated with VAS of pain. The World Health Organization defines quality of life as an "individual's perception of his or her position in life in the context of the culture and value systems in which the patient lives and in relation to his or her goals, expectations, standards, and concerns" (4). There is a strong correlation between pain level and quality of life (Figure 5).

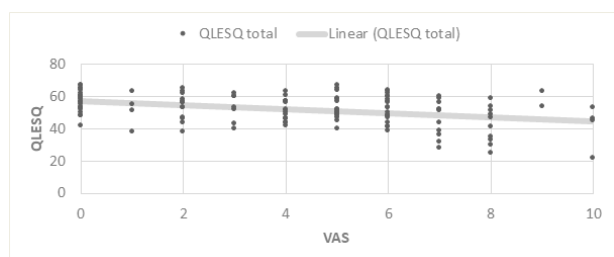


Figure 5: Pain Score based on the Individual's Quality of Life, $p < 0.001$

A high level of pain is associated with a low quality of life. Pain due to cancer is a symptom that affects most aspects of a person's life, including mental health, activities of daily living, physical functioning and social interactions. In the oncological patients from our cohort study we also noticed a close correlation between depression and anxiety on the one hand and quality of life on the other hand. Depression and anxiety are associated with impaired quality of life, which refers to subjective satisfaction with one's psychological, physical and social functioning. This correlation is statistically significant with a p value < 0.01 .

Insomnia is a condition of impaired sleep, with difficulties in initiating or maintaining sleep, which associate experiencing sleep as nonrestorative and unrefreshing, despite having the appropriate opportunity for sleep to occur (5). It is a very common medical complaint in primary care patients, and the same is true for patients in oncological care, which is illustrated by studies that report that the prevalence of insomnia is over 50% (6). Insomnia has multiple consequences with a negative impact on the capacity to perform normal functions and on the quality of life. We found a strong correlation between insomnia score and quality of life score. This result indicates that a high score of insomnia leads to a poor quality of life (Figure 6).

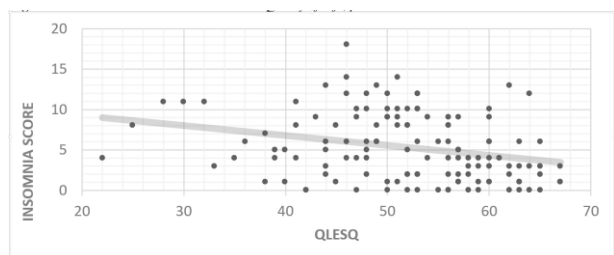


Figure 6: Quality of Life based on the Insomnia Score, $p < 0.01$

In addition, the level of pain has a strong connection with the severity of insomnia.

In conclusion, insomnia is a strong predictor for the development of psychiatric disorders (p value < 0.01). The vicious cycle indicates how the severity of insomnia leads to anxiety and depression and these two may lead to a decreased quality of life. In consequence it is very important to treat insomnia from an early stage.

Discussions and Conclusions:

To sum up, oncological patients should always have access to psychiatric services and need a strict screening for psychiatric comorbidities due to the high prevalence of this type of disorders (7). Both the disease and the oncological treatment may influence the quality of life and may lead to anxiety, depression, insomnia disorders, and a low quality of life.

The level of pain is a good predictor for anxiety and depression, and for quality of life; insomnia is similarly predictive.

The study results are similar to the ones found in a systematic review of the past 40 years (8), which estimated prevalence of chronic pain in patients with advanced cancer ranges from 64 to 74 percent, while pain in populations undergoing cancer treatment ranges from 33 to 59 percent.

Various combined therapies for cancer, including surgery, radiation and chemotherapy, have increased disease control on the one side, but these improvements have come at the expense of increased acute and late effects, which may, on the other side, have a more serious effect on quality of life and function (9,10).

Even if most of these patients require psychiatric treatment, it should be carefully prescribed because many of them already suffer from pulmonary, renal or hepatic failure. The choice of the right therapy is always a great challenge in this complex situation.

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INFLUENCE OF PSYCHIATRIC COMORBIDITY ON QUALITY OF LIFE IN ONCOLOGICAL PATIENTS

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Abstract

Introduction: Quality of life is an important goal in the management of oncological patients. Quality of life can be influenced by numerous factors such as the level of functioning, age, as well as the presence of comorbid pathologies, both somatic and psychiatric.

Objectives: The aim of this study is to measure the quality of life in a group of oncological patients, as well as the influence of various factors, particularly psychiatric comorbidities, on this variable.

Materials and Methods: Data was obtained from a prospective, non-randomized, longitudinal study that was conducted over a 4-year span (2015-2018) and included 294 oncology patients. Patients were assessed by means of the following instruments: Hospital Anxiety and Depression Scale - HADS, Quality of Life Enjoyment and Satisfaction Questionnaire - QLESQ-SF, Visual Analog Scale for Pain - VAS Pain, CAGE Questionnaire for alcohol addiction, Global Assessment of Functioning Scale - GAF and Montreal Cognitive Assessment - MoCA

for cognitive disorders.

Results: Approximately 30% of patients included in the study obtained scores above the threshold for depression or anxiety on the HADS subscales, indicating an important association between cancer and the presence of depressive or anxious symptoms. Statistical analysis confirmed that the presence of depressive or anxious symptoms is a statistically significant predictor of quality of life. Quality of life is also influenced by the presence of cognitive impairment, alcohol use, and pain intensity as measured by the VAS Pain.

Conclusions: Given that quality of life is influenced by the presence of psychiatric comorbidities (depression, anxiety, cognitive impairment, alcohol use), screening for these pathologies in all cancer patients and a multidisciplinary oncologist-psychiatrist-psychologist therapeutic approach are necessary.

Keywords: quality of life, cancer, depression, anxiety, comorbidity

Introduction

Cancer is one of the most important health problems of the century due to high mortality and morbidity. Cancer is estimated to be the leading cause of mortality, as well as the most important factor influencing global life expectancy (1).

Patients with oncological pathology have a high prevalence of comorbid psychiatric disorders, but also of psychological distress (2). The prevalence of psychological distress and significant comorbid psychiatric disorders in cancer patients can reach over 80% (3). Neoplastic disease along with psychiatric comorbidities significantly influences how these patients perceive the quality of their lives.

The quality of life is a subjective and holistic perspective of the person on one's personal life regarding different aspects of physical and psychological well-being, as well as social functioning (4). It is a broad and complex concept that is influenced by physical health, personal beliefs, psychological well-being, environmental aspects or social relationships.

Lately, the concept of quality of life and its measurement have been important goals in the therapeutic approach of various pathologies, including oncological diseases.

Materials and Methods

over a 4-year span (2015-2018) and included 294 patients from 2 general hospitals with oncology, radiotherapy and haematology departments. Patients have signed an informed consent form to be enrolled in the study and evaluated. Demographics, data on somatic pathology, as well as data on psychiatric history were collected.

Six scales were applied to assess psychiatric comorbidities, quality of life, and pain level. The Hospital Anxiety and Depression Scale – HADS was used to determine anxiety and depression levels, the Quality of Life Enjoyment and Satisfaction Questionnaire - Q-LESQ-SF to estimate quality of life, Visual Analog Scale for Pain – VAS-Pain for pain levels, CAGE Questionnaire for alcohol use. Two other scales were used to assess: social, occupational and psychological functionality (Global Assessment of Functioning Scale - GAFS) and cognitive impairment degree (Montreal Cognitive Assessment Scale – MoCA).

Because the main objective of the study was to assess the quality of life in oncology patients and the influence of various factors on said quality, we will present some information about the instrument used: the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q). This is a tool for self-assessment of life quality and satisfaction in different areas of functioning, developed in 1993 by Endicott and collaborators (5). The initial form is

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comprised of 93 questions, but due to the rather complex format, an abbreviated 16-question version is used in practice, as well as the so-known Quality of Life Enjoyment and Satisfaction Questionnaire – Short Form (Q-LES-Q-SF). The abbreviated Q-LES-Q-SF form consists of 14 questions from the general activities domain, as well as two questions regarding medication and general satisfaction with life (6). A 5-point Likert Scale is used for scoring: Very Unsatisfied - 1 point, Unsatisfied - 2 points, Neither unsatisfied nor satisfied - 3 points, Satisfied - 4 points, Very satisfied - 5 points. The total score is obtained by adding together the scores of the first 14 questions. The last two questions, regarding medication and general satisfaction with life, each receive a separate score and have been added to be analysed in clinical context. In order to evaluate and compare the results, we employed a calculation formula which involves transforming the gross score obtained by adding the scores of the questions into a percentage. A higher score implies a better quality of life, while the authors of the scale have defined normal values as within the 70% - 100% range.

Data were collected and centralized using Google Sheets. Statistical analysis was performed using SPSS 20 (Statistical Package for the Social Sciences 20). P values of 0.05 or less, with a confidence interval (CI) of 95%, were considered statistically significant. Descriptive statistical analyses, statistical hypothesis testing, and regression models were applied.

Results

The study included 294 patients with oncology diagnoses who were evaluated over a 4-year period (2015-2018). The study group was comprised of 40% men and 60% women, with a mean age of 59 years old. The distribution according to residence environment was: 69% living in an urban area and 31% in a rural area. Data on education was also collected: 69% reported secondary education, 28% higher education, and 3% reported no form of education. The most frequently encountered cancer sites were: breast (64 female patients), different forms of leukaemia (60 patients) and colorectal (50 patients) (Figure 1).

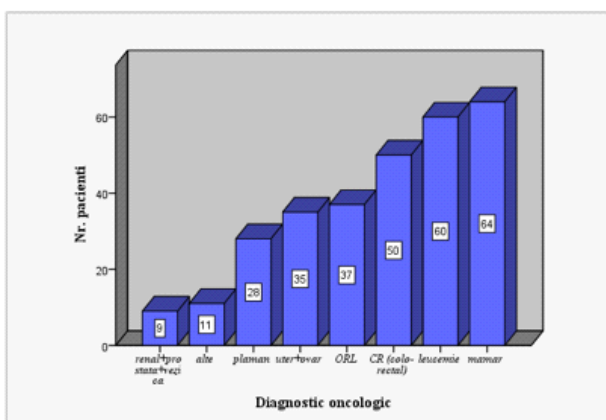


Figure 1. Patient distribution according to cancer site/type

Most patients assessed had no available information on staging of the oncological disease (42%). Stage IV was reported by 38%, stage III by 14%, stage II by 4%, and 9 patients presented with metastases. In terms of personal medical history, 22 patients had a

history of a depressive episode diagnosis, 14 a diagnosis of anxiety disorder, 6 of cognitive disorder and 8 of insomnia. From the perspective of somatic comorbidities, 13.6% had had a neurological diagnosis (the most common being that of discopathy), 33% cardiovascular pathology, 8.2% diabetes mellitus, 14.3% gastrointestinal pathology, 7.5% pulmonary pathology, 7.8% renal pathology, 7.1% endocrinological pathology, 6.8% urogenital pathology.

Both for the depression and the anxiety subscale of the HADS scale, a score of 8 was considered to be the limit between normal and suspected cases of depression or anxiety (7). For the depression subscale in the examined group the following values were obtained: total mean value: 6.47; 181 patients obtained scores under 8, with an average of 4.02; 113 patients obtained scores higher than or equal to 8, with an average of 10.38.

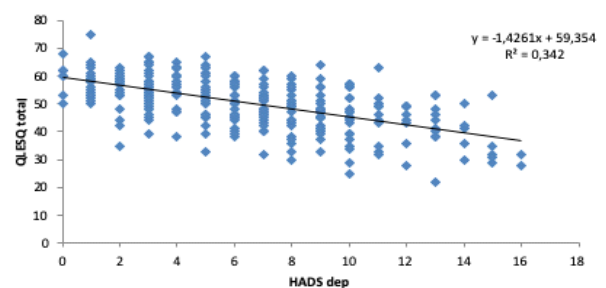


Figure 2. The influence of HADS depression subscale scores on Q-LES-Q-SF scores

For the anxiety subscale in the examined group the following values were obtained: total mean value: 7.17; 167 patients had lower than 8, with an average of 4.32; 127 patients ranked scores higher than or equal to 8, with an average of 10.92. Approximately half of the patients included in the study presented either depressive or anxiety symptoms, values above the averages obtained in similar studies targeting the general population (8)

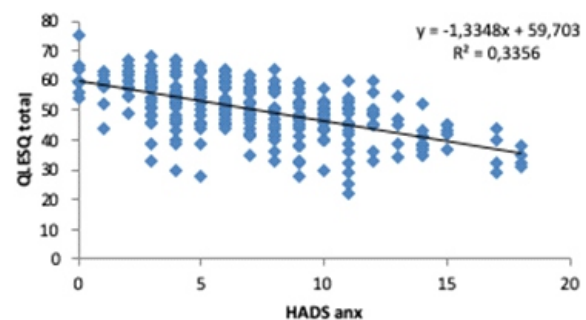


Figure 3. The influence of HADS anxiety subscale scores on Q-LES-Q-SF scores

For the assessment of cognitive function, the Montreal Cognitive Assessment scale - MoCA was used, cognitive impairment being considered present for scores lower than 26 (9). The mean score was 24.5 points, 50.4% of patients obtaining scores below 26 and 49.6% registering scores higher than or equal to 26. The fact that half of the evaluated patients presented with cognitive impairment may be due either to advanced age in the group (mean age 59 years) or reflect secondary side effects

of oncology therapy, which can produce the so-called "chemo brain" (10).

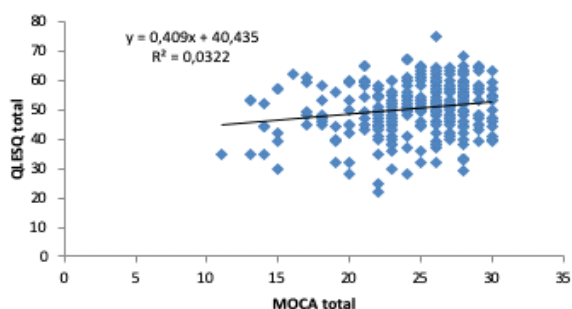


Figure 4. The influence of MoCA scale scores on Q-LES-Q-SF scores

Alcohol consumption was evaluated using the CAGE Questionnaire in a group of 130 patients, and scores over 2 were considered clinically significant (11). The average score was 0.77. 73.8% of patients had scores lower than 2 and 26.2% had scores higher than or equal to 2, which implies that approximately a third of the patients included in the study presented problems related to alcohol abuse or even addiction.

The subjective level of pain was measured using a visual analogue scale for pain (VAS-Pain) with results between 0 (no pain) and 10 (worst pain imaginable). The scale was applied to 130 patients and the mean score of this subgroup was 4.15. The distribution of scores can be seen in Table 1, highlighting the fact that at the time of examination approximately half of the patients experienced average pain levels

Score	No. of patient	%	Cumulative %
0	2.4	1.8.5	1.8.5
1	4	3.1	21.5
2	14	10.8	32.3
3	7	5.4	37.7
4	17	13.1	50.8
5	18	13.8	64.6
6	19	14.6	79.2
7	11	8.5	87.7
8	10	7.7	95.4
9	2	1.5	96.9
10	4	3.1	100.0
Total	130	100.0	

Table 1. Score distribution for pain on the VAS-Pain scale

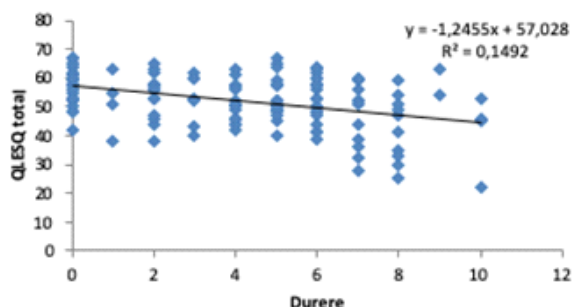


Figure 5. The influence of VAS-Pain scores on Q-LES-Q-SF scores

For the assessment of global functioning, the Global Assessment of Functioning Scale - GAFS (12) was used in 130 of the patients included in the study. Score distribution suggests relatively good functioning in more than half of the evaluated patients (Table 2).

Score	No. of patients	%	Cumulative %
21-30	2	1.5	1.5
31-40	3	2.3	3.8
41-50	5	3.8	7.7
51-60	16	12.3	20.0
61-70	30	23.1	43.1
71-80	41	31.5	74.6
81-90	33	25.4	100.0
Total	130	100.0	

Table 2. Score distribution on the GAF functioning scale

We studied the influence of the psychiatric comorbidities highlighted by the scores on the HADS, MoCA, or CAGE scales on the quality of life assessed through Q-LES-Q-SF scores. In addition, an attempt was made to identify other factors that may influence the quality of life in patients with oncological diseases, such as: age, gender, cancer site, pain intensity, somatic comorbidities, chemotherapy or radiotherapy, global functioning level.

In order to determine the influence of depressive symptoms simple linear regression was used, evidenced by the HADS depression subscale scores. A statistically significant model was obtained ($F(1,292) = 151.77, p < .001$) and the adjusted R-square indicates that 34% of the Q-LES-Q-SF score variation can be explained by the variation of HADS depression subscale scores. The presence of depressive symptoms is a statistically significant predictor of quality of life ($t = -12.32, p < .001$). The regression model shows that an increase by one score point on the HADS depression subscale determines an average decrease by 2.55 percent in Q-LES-Q-SF scores. Simple linear regression was also used to determine the influence of anxiety symptoms, highlighted by the HADS anxiety subscale scores. A statistically significant model was obtained ($F(1,292) = 147.52, p < .001$), adjusted R-square indicating that 33% of Q-LES-Q-SF scores variation can be explained by the variation of HADS anxiety subscale scores. The presence of anxiety symptoms is a statistically significant predictor of quality of life ($t = -12.14, p < .001$) and the regression model shows that a 1 point increase in score on the HADS anxiety subscale leads to an average decrease by 2.38 percent in Q-LES-Q-SF scores.

In order to determine the influence of cognitive impairment, as evidenced by the MoCA scale scores, simple linear regression was applied. A statistically significant model was obtained ($F(1,292) = 9.37, p < .001$) and the adjusted R-square indicates that 3% of the Q-LES-Q-SF scores variation can be explained by the variation of MoCA scale scores. The presence of cognitive impairment symptoms is a statistically significant predictor of quality of life ($t = 3.63, p < .001$). The regression model shows that

a decrease by 1 point in the MoCA scale score determines an average decrease by 0.7 percent in Q-LES-Q-SF scores.

In order to determine the influence of alcohol use, highlighted by the CAGE Questionnaire scores, simple linear regression was yet again used. A statistically significant model was obtained ($F(1,128) = 5.98, p < .001$) and the adjusted R-square indicates that 3% of the Q-LES-Q-SF scores variation can be explained by the variation in scores for the CAGE Questionnaire. The presence of alcohol use is a statistically significant predictive factor of quality of life ($t = -2.44, p < .001$), the regression model showing that for a 1 point increase in the CAGE Questionnaire score there is an average 1.52 points decrease in Q-LES-Q-SF score.

In order to determine the influence of age on the quality of life, simple linear regression was used, demonstrating that age represents a statistically significant predictive factor of quality of life ($t = -3.96, p < .001$). The regression model showed that with every added year, Q-LES-Q-SF score drops by 0.32 percent.

Depending on the site of the type of cancer, patients were divided into 8 groups (Figure 1). The highest average Q-LES-Q-SF quality score was that of patients with ENT cancers (69.11%), followed by patients with colorectal neoplasms (67.71%). The lowest average Q-LES-Q-SF scores were registered in patients with pulmonary neoplasms (58.03%) and in those with leukaemias (62.23%), but the differences in mean Q-LES-Q-SF scores depending on location of the cancer type are not statistically significant ($F = 1.607, p = 0.133$).

To determine the influence of pain, assessed through the VAS-Pain scale, on quality of life simple linear regression was used. Pain is a statistically significant predictor of quality of life ($t = -4.73, p < .001$), the regression model showing that each added point on the VAS scale leads to a decrease in Q-LES-Q-SF scale values by 1.24 percent.

Tests were applied to determine whether there were statistically significant differences between the mean Q-LES-Q-SF scores based on the presence of somatic comorbidities (neurological disorders, cardiovascular disorders, diabetes mellitus, gastrointestinal pathology, pulmonary pathology, renal pathology, endocrinological pathology, uro- genital pathology). A statistically significant difference was observed only in the presence of cardiovascular disorders ($F = 12.24, p = 0.001$).

Also, in terms of a previously established psychiatric diagnosis ($N = 44$), there was a statistically significant difference between Q-LES-Q-SF mean scores in patients with psychiatric history compared to those with no history ($F = 6.57, p = 0.01$).

Tests were applied to determine whether there were statistically significant differences between the mean Q-LES-Q-SF scores depending on the inclusion of chemotherapy or radiotherapy in the therapeutic approach. The mean Q-LES-Q-SF score for chemotherapy patients is 64.41% and for those without chemotherapy it is 65.03%. The mean score on the Q-LES-Q-SF scale for radiotherapy patients is 62.90% and that for those without radiotherapy it is 65.56%. In our study group, there were no statistically significant differences in quality of life depending on chemotherapy regimen inclusion ($F = 0.05, p = 0.80$) or on radiotherapy ($F = 1.86, p = 0.17$). The data obtained are not consistent

with those reported in the literature which suggest that the presence of chemotherapy or radiotherapy can lower the quality of life of oncological patients (13).

The Mann-Whitney test was applied in order to verify whether there were statistically significant differences between the Q-LES-Q-SF average scores based on gender. No statistically significant difference was observed ($p = 0.164$).

Simple linear regression was used to determine the influence of the functioning level, assessed on the GAF scale, on the quality of life. A patient's degree of functioning is a statistically significant predictor of quality of life ($t = 3.878, p < .001$), the regression model showing that each 1-point increase on the GAF scale determines an average increase in Q-LES-Q-SF score of 0.4 percent.

Discussions and Conclusions

Quality of life should represent a therapeutic objective for all cancer patients, and an assessment for this parameter, as well as for the various factors that can influence it, should be included in all therapeutic protocols. A large number of oncological patients present with low quality of life, due to the influence of psychiatric comorbidities (depressive episodes, anxiety states, alcohol use, cognitive impairment) (14, 15), but also because of a low degree of functioning or changes in social relationships (16).

Approximately half of the patients included in our study obtained scores above the threshold for depression or anxiety on the HADS subscales, indicating an important association between cancer and the presence of depressive or anxious symptoms. Moreover, statistical analysis confirmed that the presence of depressive or anxious symptoms is a statistically significant predictive factor for Q-LES-Q-SF assessed quality of life. Each increment by one point on the HADS depression subscale leads to an average drop by 2.55 percent of the Q-LES-Q-SF scale score values, and each one point increase on the HADS anxiety subscale determines an average decrease of 2.38 percent of the Q-LES-Q-SF scale scores.

Quality of life is also influenced by the presence of cognitive impairment, evidenced by the fact that a one point decrease on the MoCA scale determines an average decrease of 0.7 percent of Q-LES-Q-SF score values. Cognitive impairment was observed in approximately 50% of the patients included in the study and may be associated with either the increased age of patients (average age 59 years old) or the presence of oncologic therapy, in particular of chemotherapy, which, as has been shown by studies, may cause a decrease in cognitive functions (17).

Quality of life is also significantly influenced by alcohol use, by subjective level of pain, and by age, but is not influenced by the gender of the patient. As a result of subjective pain assessment by means of the VAS Pain scale it was observed that a one-point increase in pain intensity led to a 1.24% decrease in scores on the Q-LES-Q-SF scale. This is an indication of the importance of pain therapy in oncology patients (18).

Chemotherapy or radiotherapy do not influence the quality of life of the patients included in the study, but this may be influenced by the presence of cardiovascular comorbidity or the presence of a history of psychiatric

diagnosis.

From the perspective of cancer type and its localization, the data obtained reveal that lung cancer patients registered the lowest average score on the quality of life assessment scale, but showing no statistically significant differences between sites. A high Q-LES-Q-SF average score was that of patients with ENT neoplasms (69.11%), which differed from literature data suggesting a poor quality of life in these patients (19). One of the most important treatment goals in the case of oncological patients should be to maintain an optimal level of functioning and quality of life. Seeing that quality of life is influenced by the presence of psychiatric comorbidities (depression, anxiety, cognitive impairment, alcohol use), screening for these pathologies is necessary in all cancer patients. There are no guidelines regarding the tools to be used in the screening of psychiatric comorbidities, but recommendations suggest the use of simple, preferably self-administered tools. In the presence of comorbidities, the existence of multidisciplinary oncologist-psychiatrist-psychologist therapeutic teams should be considered.

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VULNERABILITY TO BURNOUT IN HEALTH PROFESSIONALS - DIMENSIONAL PERSONOLOGICAL APPROACH

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ABSTRACT

Burnout syndrome as an occupational disease is more and more present among the professions related to care and aid. It is very closely related to working conditions, but also to the dimensional component of personality. Certain personality traits may determine the choice of a profession, but at the same time, these traits may favor the occurrence of burnout symptoms.

The present research identifies the dimensions of

the personality and burnout that prevail at physicians and registered nurses professional categories, searching for dissimilarities and similarities. Although physicians and registered nurses suffer equally of burnout syndrome, they present similarities as regarding the dimensions of the personality but concerning the dimensions of the burnout they present dissimilarities.

KEY WORDS: *burn-out, dimensions of personality, physicians, registered nurses*

INTRODUCTION:

Burnout syndrome was scientifically substantiated by Christine Maslach in the 70's after an ample research on the employees from the healthcare system (1).

Burnout is a distinct disorder in DSM V.(2). In ICD-10 is included in the category "Problems related to life management difficulty."(3).

Burnout symptoms affect the individual entirely:

-physically: permanent fatigability, mixed insomnias, low immunity

-emotionally: sadness, pessimism and anhedonia, diffuse anxiety, helplessness and self-devaluation feelings

-cognitively: ideas of incurability and personal incompetence, lack of self-confidence

-behaviorally: motivational decline, self-isolation, avoiding to take responsibilities, addictive tendencies, verbal aggressiveness, absenteeism from work.

The differential diagnosis is performed searching the causes that led to the occurrence of these symptoms. If these causes are strictly related to fulfilling the professional role, then we can talk about burnout, although the manifestations almost coincide with the ones of a depression.

The connection between burnout and personality has been made for the first time by Freudenberger (4). at the beginning of the 70's. He called burnout "the fighter's disease" and issued the hypothesis according to which the persons who like to fight are more likely prone to burnout. These people have an idealized image about themselves and they perceive themselves as competent, charismatic and dynamic, and in time lose their self-confidence because they ascertain they cannot achieve their goals as they hard to reach. Thus, a definition of burnout has been formulated as a state of chronic fatigue, frustration and

depression, due to a cause hard to accomplish and which fails in producing the expected rewards, leading in the end to reduced involvement in work and low motivation to work.

HYPOTHESES:

1. There are personality traits which prevail in healthcare staff and they define the motivation of choosing fields from the healthcare profession

2. There are differences between the dimensions of burnout in physicians and dimensions of burnout in registered nurses.

3. There is a correlation between the dimensions of personality and the gravity of burnout symptoms by professional categories of physician-registered nurse and by type of service, clinical ward versus emergency service.

MATERIALS AND METHOD:

We have chosen a batch of 62 health professionals composed of 36 physicians and 26 registered nurses who practice at a clinical ward of the Emergency Clinical County Hospital and at SMURD Service (*Mobile Emergency Service for Resuscitation and Extrication*).

The batches in numbers are the following:

-Clinical ward: 22 physicians, 11 registered nurses, a total of 33 health professionals

-Emergency service: 14 physicians, 15 registered nurses, a total of 29 health professionals.

The tests used are the following:

-Decas Personality Inventory (DECAS), to identify the personality dimensions which occur most frequently in an accentuated way in health professionals

-Maslach Burnout Inventory (MBI), to identify the burnout intensity

Presentation of tests:

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DECAS measures 5 dimensions of personality from the Big Five perspective. These are: Openness, Extraversion, Conscientiousness, Agreeableness, Emotional Stability.

Openness is found at creative and independent persons, with a large general knowledge, highly interested in debating ideas.

Extraversion belongs to exultant, sociable and energetic persons.

Conscientiousness is typical of disciplined persons, with a highly need for professional achievement and a strong sense of duty.

Agreeableness is typical of understanding persons, broadminded, with team spirit.

Emotional stability is associated with emotional maturity and belongs to calm persons, self-confident, managing stress.(5)

MBI contains 23 items grouped by 3 dimensions: depersonalization, reduced personal accomplishment and emotional exhaustion.(6).Depersonalization (DP) refers to the tendency to see others as impersonal objects and keep their distance from them. Reduced personal accomplishment (RP) refers to the tendency to see oneself as non-performing, lacking value, having a negative influence on co-workers. Emotional exhaustion (EE) refers to the fact that employees feel like they function beyond the limit of the comfortable.(7).

STATISTICAL ANALYSIS

Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS, version 20, Chicago, IL,USA). Description of categorical data has been performed by computing frequencies and their 95% confidence intervals. Descriptive statistics for central tendency and spread of quantitative variables have been computed. Normality of quantitative variables was tested using a Kolgomorov - Smirnov test. Since all investigated variables seemed to have originated from normal distributions, Student's test for independent groups was used for hypothesis testing. Correlation between quantitative variables has been

investigated using Pearson's correlation coefficient (r) and evaluated for statistical significance at a level alpha = 0.05.(8).

RESULTS:

For the first hypothesis, after applying the personality questionnaire, have been identified the personality dimensions that obtained very high scores (T scores between 66,00 and 80,00, percentils between 94 and 99) and high scores (T scores between 56,01 and 65,99) as well as those that obtained very low scores (T scores between 20 and 34,99, percentils between 1 and 7) and low scores (T scores between 35,00 and 44,99, percentils between 8 and 30). Both types of results can describe attributes which may define a personality profile specific for the health professional.

For hypotheses 2 the burnout descriptors have been compared by professional categories (physicians-registered nurses).

For hypothesis 3 the personality dimensions have been correlated with each burnout descriptor.

Hypothesis 1

In physicians, we have determined high and very high values of openness, extraversion and emotional stability (table 1). An exaggerated openness supposes an excessive involvement in establishing social relations, which finally leads to fatigue and exhaustion.

Extraversion may be a conducive condition to the occurrence of burnout syndrome since, as a characteristic of A type personality and of the sanguine temperament, draws the individual into a multitude of communication relations.

Emotional stability is a quality. It is obtained over the course of the individual's life, when he has gone through adaptive situations long enough, and has built coping mechanisms, and it may be considered a quality, which helps to diminish burnout, when it has already installed itself.

For the batch of registered nurses, the results are the same. The dominant dimensions are openness, extraversion and emotional stability.

Openness, $r = .28$	Mean ± Standard deviation Physicians		Mean ± Standard deviation Registered nurses	
		53.71 ± 1.72	50.88 ± 1.73	
Extraversion, $r = .78$	Mean ± Standard deviation Physicians		Mean ± Standard deviation Registered nurses	
		55.97 ± 1.78	55.19 ± 2.25	
Conscientiousness, $r = .71$	Mean ± Standard deviation Physicians		Mean ± Standard deviation Registered nurses	
		45.26 ± 1.16	46.25 ± 2.83	
Agreeableness, $r = .91$	Mean ± Standard deviation Physicians		Mean ± Standard deviation Registered nurses	
		49.53 ± 1.11	49.47 ± 1.59	
Emotional stability, $r = .86$	Mean ± Standard deviation Physicians		Mean ± Standard deviation Registered nurses	
		51.05 ± 1.69	50.60 ± 1.89	

Table 1 Mean and Standard deviation for dimensions of personality at physicians and registered nurses

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
DP	.049	.826	-710	60	.480	-1.474	2.077	-5.628	2.679
			-699	50.833	.488	-1.474	2.109	-5.709	2.760
RP	2.249	.139	-.558	60	.579	-1.489	2.667	-6.825	3.846
			-.532	43.778	.597	-1.489	2.799	-7.130	4.152
EE	1.800	.185	-2.060	60	.044	-5.440	2.641	-10.724	-.156
			-2.047	52.807	.046	-5.440	2.658	-10.771	-1.109

Table 2 T test for comparison DP, RP, EE by batches of physicians-registered nurses

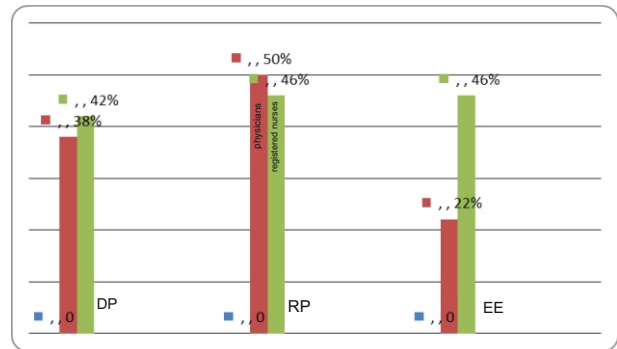
In relation to the differences that arise between the batches of clinical ward-emergency service, these are obvious in relation to conscientiousness. For the clinical ward, conscientiousness appears low in physicians. For the emergency service, conscientiousness is lower in registered nurses, this being a condition for burnout to emerge.

Hypothesis 2.

The results by the 3 categories of burnout are as follows:

- a) Depersonalization arises more often in the batch of registered nurses in relation to the batch of physicians (Figure 1).
- b) For the Reduced personal accomplishment parameter the batch of physicians had higher scores in comparison to the batch of registered nurses (Figure 1).
- c) The Emotional Exhaustion component manifests itself more in registered nurses in relation to physicians. They have work communication relations both vertically (physician-registered nurse) and horizontally (department co-worker), which may explain the higher emotional exhaustion tendency (Figure 1).

For this component there are the most significant differences from a statistic point of view, in comparison to the other two (DP and RP), the T test having a value of -2.060, which corresponds to a significance threshold of $P < 0.05$ (Table 2)



Hypothesis 3.

We obtained a positive correlation between Conscientiousness and Depersonalization in the batch of physicians (Pearson Correlation 3.22, Table 3). It means that a high conscientiousness may be a condition for the occurrence of depersonalization in physicians, possibly due to medical decisions.

We obtained a negative correlation between Emotional Stability and Personal fulfillment in the batch of health professionals working at a clinical ward (Pearson Correlation -4.01, Table 3). It means that an increased emotional stability may help to achieve a satisfactory personal accomplishment..

	DP med	DPasist	DPpolitica	DPsmurd	RP med	RPasist	RPpolitica	RPsmurd	EE med	EEasist	EEpolitica	EEsmurd
Pearson Correlation	.082	-.197	-.002	-.231	.033	-.008	-.107	-.175	-.009	-.258	.128	-.127
D Sig. (2-tailed)	.603	.419	.993	.266	.849	.971	.555	.364	.963	.177	.478	.511
N	43	19	34	25	36	25	33	29	31	29	33	29
Pearson Correlation	.229	.448	.119	-.012	-.235	.053	.082	-.016	-.155	.024	.084	-.037
E Sig. (2-tailed)	.139	.054	.503	.953	.167	.802	.649	.936	.404	.902	.644	.847
N	43	19	34	25	36	25	33	29	31	29	33	29
Pearson Correlation	-.322*	-.118	-.282	-.131	-.024	-.147	-.062	-.027	-.080	-.336	-.155	-.065
C Sig. (2-tailed)	.035	.629	.106	.531	.890	.482	.732	.888	.668	.075	.388	.739
N	43	19	34	25	36	25	33	29	31	29	33	29
Pearson Correlation	-.019	-.182	.216	-.131	.018	-.008	-.134	.013	-.145	-.049	-.167	-.033
A Sig. (2-tailed)	.903	.455	.219	.532	.917	.969	.459	.946	.438	.802	.352	.866
N	43	19	34	25	36	25	33	29	31	29	33	29
Pearson Correlation	.262	.089	.281	-.007	.044	-.292	-.401*	-.117	-.024	-.214	.322	-.320
S Sig. (2-tailed)	.090	.718	.107	.975	.797	.157	.021	.546	.897	.264	.067	.091
N	43	19	34	25	36	25	33	29	31	29	33	29

Table 3. Correlations between burnout and personality

CONCLUSIONS:

The personality dimensions prevailing in the medical staff are Openness, Extraversion and Emotional balance. These dimensions predispose in choosing a profession in the medical field and to work with people, helping in the manifestation of empathy, of understanding people, the desire to help people and the capacity to take decisions for their health.

Independently of the sector in which they work, both physicians and registered nurses suffer just as much of burnout. Whereas the physicians are not feel fulfilled on the plane of personal accomplishment, registered nurses suffer easier of depersonalization and emotional exhaustion.

SMURD physicians experience more acutely Depersonalization and Emotional exhaustion than those at a clinical ward, but the feeling of personal accomplishment is higher. In relation to registered nurses, things are just the opposite: the ones working at the clinical ward are more exposed to Depersonalization and Emotional exhaustion than the ones working at SMURD emergency service.

The personality traits which determine a person to choose a profession in the medical field become a conducive factor in the occurrence and setting in of burnout, but they also can help in diminishing the symptomatic manifestations of burnout by mobilizing certain coping mechanisms.

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DIAGNOSIS EVOLUTION TO ADULTHOOD IN A GROUP OF ADHD PEDIATRIC PATIENTS FROM “PROF. DR. ALEX. OBREGIA” PSYCHIATRY HOSPITAL

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Abstract

Background. Even though until recently it was believed that ADHD is a primarily childhood condition, once the adult diagnostic criteria was introduced in DSM 5, the clinical interest for this disorder increased, and it's nowadays recognized that adults continue to experience high levels of clinically significant symptoms.

Methods. In this observational, retrospective study we investigated the evolution of psychiatric diagnosis to adulthood in a group of patients that received an ADHD diagnosis before turning 18. In the study it's been used the information data base of „Prof. Dr. Alex. Obregia” Psychiatry Hospital. In the period January 2009-December 2018 in Child and Adolescent Psychiatry Department there were assessed 2.628 children/adolescents that met the criteria for an ADHD diagnosis. 58 patients returned to the same hospital after turning 18

years of age.

Results. ADHD diagnosis was maintained in 5 out of the 58 patients. 61.40% of the adult patients had a Personality Disorder. 25% of the patients had behavioral disorders secondary to drug use, and 73.33% of subjects with chronic substance abuse had comorbid a personality disorder. Regarding the Affective Disorders, 65% of the patients presented episodes of unipolar Depression, while 35% had Affective Bipolar Disorder.

Conclusions. The obtained data are consistent with those in the literature. The highlighted results demonstrate that there is a need for increased awareness in terms of continuity of ADHD diagnosis in adulthood, because this disorder is still underdiagnosed and less treated in adult life.

Keywords: adult ADHD, Depression, Bipolar Disorder, drug abuse

INTRODUCTION

ADHD (Attention Deficit Hyperactivity Disorder) is considered a chronic neurodevelopmental disorder that once was believed to “be outgrown” once the patients gets older. Nowadays the concept that patients with ADHD “grow out of it” is considered a medical myth, because 60% of children diagnosed with this condition continue having symptoms into adulthood (1).

In childhood, ADHD prevalence is between 4-8% (2) in a ratio of 3: 1 boys / girls (3). In adulthood, the prevalence is estimated to be around 3-5% (4), but epidemiological studies indicate an equal gender distribution, different from the groups of studied children where the boys are predominant. The predominant form of inattention is twice as common in girls, while boys experience behavioral and hyperkinesia more frequently (5). This may explain the fact that girls are underdiagnosed or diagnosed at an advanced age. They have a different comorbidity pattern (generally dominated by anxiety and depressive episodes) than boys who show defiant, aggressive, disruptive behavior. This behavioral problems draws attention much more quickly to school age, and determines the teachers and parents to ask more often medical assessment for boys than for the silent, inattentive,

and distracted girls.

The clinical picture of ADHD symptoms may differ considerably between adults and children. Core impairments of ADHD - inattention, hyperactivity, and impulsivity- remain the same, but their manifestations usually change with age. In adulthood, these manifestations are more difficult to be recognized, which is why many adults remain undiagnosed. In adults, clinical picture is dominated by deficits in executive functioning and attention, while hyperactivity tends to decrease in severity. Only 20% of the ADHD patients are diagnosed and treated in adult age (6).

Symptoms of childhood are not remitted with age, they are transformed and patients “do not heal” but rather learn to live with them, more or less successfully. Basic neurobiological deficits are responsible for adult dysfunction, despite the remittance of certain features that allow the medical diagnosis. The conceptualization of ADHD as an impairment of executive and cognitive functions demonstrates that attention deficit and inhibitory deficits are maintained in patients with ADHD, even in those with whom the phenotype changes in maturity without the possibility of diagnostic formulation (7).

Childhood ADHD is associated with elevated

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rates of neurodevelopmental disorders (Autism, Learning Difficulties) or Conduct Disorders, these comorbidities being attributed to the overlapping of genetic expression (8). These developmental disorders are less studied in adulthood, but can be encountered in current clinical practice and can determine impaired functioning at this age. In adulthood, psychiatric comorbidities represent an important clinical dimension of ADHD heterogeneity, contributing to the persistence of symptoms at this age. ADHD is associated with learning problems, school dropout, frequent job shifts, financial problems, gambling and internet addiction, traffic accidents, early psychoactive substance use, sexual risky behaviors unwanted pregnancies at early ages, increased numbers of suicide attempts or mortality rates (9).

One of the reasons of the underdiagnoses issue is the fact that comorbidity is the rule rather than exception. 75% of the adults diagnosed with ADHD have at least one associated disorder, but the average is of 3 associated psychiatric disorders- mood disorders, anxiety disorders, sleeping disorders, personality disorders, addictions (early onset of substance abuse and gambling) and other neurodevelopmental disorders (10).

MATERIALS AND METHODS

The applied study is a retrospective-observational one, and investigates the evolution of psychiatric diagnosis to adulthood in a group of patients that received an ADHD diagnosis before turning 18 years old. The data was obtained using the medical information system of “Prof. Dr. Alex. Obregia” Psychiatry Hospital, the biggest psychiatric unit in Romania that provides patients assessment during admissions and regular reevaluations in the form of day hospitalizations. The computerized system of the hospital was implemented for the first time in 2009, therefore the studied time period was January 2009 - December 2018.

For avoiding bias information, there were excluded the patients that had a Pervasive Developmental Disorder or Intellectual Disability comorbid with ADHD during childhood/ adolescence.

A descriptive analysis was performed on the quantitative data and, based on the central tendency and dispersion measurements we characterized the type of the distribution, parametric or non-parametric. Based on the type of distribution the Spearman correlation coefficient was chosen to characterize the relationship between two quantitative variables. For hypotheses testing a z test for proportions was used, with a significance level of $p < .5$.

RESULTS

In the last nine years, in Child and Adolescent Psychiatry Department there were assessed 2.628 pediatric patients that received the diagnosis of ADHD. Currently, 483 of them are adults. 58 of them, returned to adult psychiatry department of “Prof. Dr. Alex. Obregia” Hospital for reassessment.

The diagnosis of ADHD was maintained in 5 of the 58 patients included in the study.

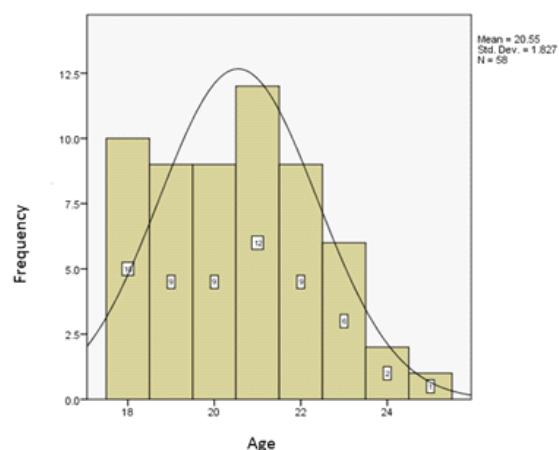


Fig. 1 Histogram of age values

Patients' age range between 18 and 22 years of age. We report a non-parametric distribution because media -2 SD is out of range. The age for which were most representatives, was 21 years old.

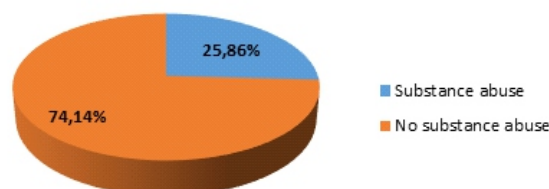


Fig. 2 Distribution of Substance Use Disorders in the group

25.86% of the adult patients presented psychoactive substance abuse, while 74.14% didn't have this disorder. 6 minor subjects with Conduct Disorders secondary to substance use, 2 of which have been found with the same diagnosis in the adult service.

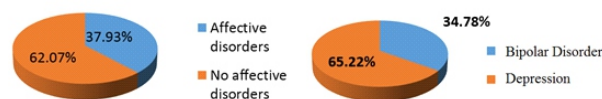


Fig. 3 The presence of Affective Disorders- Unipolar Depression more present than Bipolar Disorder

ADHD is often associated with transitory or long-term mood problems or affective disorders. This comorbidity only makes the differential diagnosis more difficult. These mood swings can induce a mental health professional to take into account a bipolar disorder or a cluster B personality disorder, rather than a clinical picture of ADHD. Regarding the presence of Affective Disorders, the obtained data are consistent with those in the state of the art – recurring unipolar depressive episodes occur more often in adults with ADHD than bipolar depression. Recent research report that recurring depression can be found in 55% of adult with ADHD in clinical population, while bipolar disorder is found in 10% of the adults with ADHD (11).

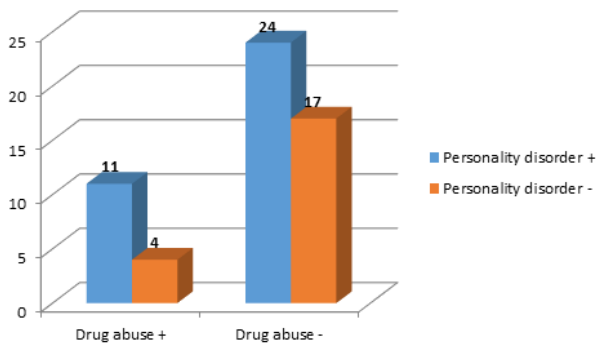


Fig. 4 Personality Disorder and Psychoactive Substance Abuse

61.40% of patients received a diagnosis of Personality Disorder. There was no statistically significant difference between the proportion of subjects with substance abuse that have a type of personality disorder and that of subjects without substance abuse but with a personality disorder. The value of z is 1.0129. The value of p is 0.3125. The result is not significant at $p < 0.05$.

73.33% of subjects with chronic substance use had comorbid a personality disorder.

		No. comorbid.	No admissions- adults
No. comorbid.	Correlation Coefficient	1.000	.458**
	Sig. (2-tailed)	.	.000
	N	58	58
	Spearman's rho		
No admissions- adults	Correlation Coefficient	.458**	1.000
	Sig. (2-tailed)	.000	.
	N	58	58

** Correlation is significant at the 0.01 level (2-tailed).

Table 1. Linear positive correlation between the number of comorbidities and the number of admissions

There were 5 subjects from the group that needed more than 10 admissions in the adult psychiatry service. The obtained data revealed that there was a statistically significant linear positive correlation between the number of comorbidities and the number of admissions. Of subjects with 5 or more admissions, all had a type of personality disorder. A Z - comparison test showed that the proportion of subjects with personality disorder who had 5 or more admissions was significantly higher than the proportion of subjects with a personalized disorder with less than 5 admissions.

CONCLUSIONS

Although the introduction of the new DSM 5 criteria and the development of new diagnostic tools for adults with ADHD increased the recognition, diagnosis and treatment of this psychiatric pathology, further mental health services are confronting a new diagnosis, which leads to underdiagnosis.

The previously exposed prevalence are worrisome and highlights the importance of early detection in maturity of ADHD symptoms, because are linked with significant comorbidity and dysfunctioning. Even individuals with subclinical forms of ADHD function less well in their family, social or professional life (12).

The pattern of comorbidities is consistent both in

childhood and maturity. Children with ADHD often present associated mood or behavioral disorders (the precursors of later occurring personality disorder) as well as anxiety, substance abuse or other neurodevelopmental conditions (Autism Spectrum Disorders). The associated psychiatric conditions encountered in our study are consistent with those reflected in the literature. In our group of patients, the main comorbidities in adulthood in subjects that received an ADHD diagnosis until 18 years old, were Depression, Bipolar Disorder, Personality Disorders and Substance Abuse Disorders. It is understandable that a chronic failure in many areas of life brings secondary a loss of perspective and a depressive condition.

In our research, the majority of subjects with chronic substance use had comorbid a personality disorder. Adolescents with ADHD start abusing alcohol and drugs at younger ages and they continue this behavioral pattern even in adulthood (13). All known psychoactive substances have a dopaminergic mechanism, which is also known as a reward system. The use of those substances can be interpreted as a self-management of the ADHD symptoms, because there were described cases of patients that reported the fact that drugs helped them to be focused, relaxed or get a better sleep.

ADHD and other comorbid disorders can be distinguished according to the age of the symptoms onset. If in the case of personality disorders or affective disorders, the clinical picture emerges in the younger adult, diagnosis of ADHD requires the onset of symptoms prior to 12 years of age (14). The presence of these co-occurrence diagnostics not only brings increased levels of distress to the patient but also increases the cost of the health care system if the disorder remains unidentified. To prevent these difficulties, DSM-5 makes the ADHD criteria for both children and adults more flexible. Assessment in the case of adults with ADHD suspicion, should contain information about developmental history, current and retrospective symptoms, and other associated diseases. The patient is the best informer, but the tendency is to undermine the severity, and for complete and correct assessment, information from family members or spouses, even childhood teachers, is useful. (15)

All these previous exposed results should help raise the awareness regarding the use of ADHD diagnosis in adult psychiatry services. In order to improve the patients' quality of life while receiving an adequate treatment (medication and psychotherapy), an early detection of ADHD and its comorbidities in adult life is needed.

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SOMATIZATION DISORDER AND THE ISSUE OF STIGMATIZATION AMONG PSYCHIATRIC PATIENTS

Claudiu G. Ionescu¹, Ana A. Talasman²

Abstract

Background: The somatic accusations disorder represents those somatic complaints which affects deeply the mental state of the patient being accompanied by an affective allure which deteriorates the relationship between the physician, family and the patient, the source of these complaints being unable to be found after the numerous medical investigations the patient demands.

Purpose and methods: The purpose of the presentation is to highlight the relationship between the multitude of investigations to which the patient is subjected and the evolution of the somatoform disorders and to describe the psycho-emotional implications in this type of pathology by describing a clinical case met in our clinic diagnosed as Somatoform Disorder according to ICD-10 and DSM-IV.

Description of the case: D.O. is a 58 years-old woman which came for the first time in a psychiatry unit with the purpose of hospital admission. The first impression on this patient was made of the various somatic complaints with occipital and cervical pain, thorax-lumbar pain and various accusations of paresthesia at the extremities of the inferior limbs accompanied by a melodramatic and profoundly affective expression of the poor general condition. For almost 17 years, numerous

medical investigations with negative results and consultations with doctors from various specialties and from different cities in the country, as well as alternatives methods of treatment such as massage ,spa, alternative medicine and even local healers were used because of the fear of stigma the patient may felt searching for psychiatric help. Unsatisfied and constantly affected by his current state , the patient has finally recognized that it may be reasonable a psychiatric approach towards his condition and required specialized medical service. Following hospitalization which consisted of psychotherapy, psychotropic antidepressant, anxiolytic and brain neurotrophic treatment, the somatic complaints decreased in intensity to the patient`s tolerable threshold.

Conclusions: Somatic complaints and the denial of a possible psychiatric etiology creates a psycho-familial picture difficult to accept and with its numerous investigations and presentations in various medical services and a purposeless and unintended journey in the identification of the somatic complaints while the material, moral and affective costs are up to date.

Key-words: somatic complaints, psychosomatic, somatoform, stigma

INTRODUCTION:

The somatic complaints or medically unexplained symptoms represent those type of disorders in which the mental state of the patients is impaired because of the numerous physical complaints the patient presents and to which no organic substrate is found.⁰

It is well-known the relationship often difficult and faulty between the physician and the patient in case of the Somatoform Disorder, the doctor remaining helpless in front of the plethora of symptoms that accompany an already damaged mental state, the patient's therapeutic compliance and his trust reaching an increasingly lean level.

Accompanying various psychiatric disorders but also self-contained, the somatic complaints decrease the quality of life and endanger the socio-familial functionality of a patient who often fails to understand the global context of the disorder and its evolution.⁰

Being the third psychiatric condition in Spain and one of the most prevalent in the US presenting in primary care units⁽³⁾, the Somatoform Disorder fully deserves its rank in the research field and the attention paid to considering the high costs level of this condition.⁽⁴⁾

We'll present the case of a patient who has never been admitted to a psychiatric unit before us and whose problems of this type started , according to the psychiatric interview, almost 17 years ago.

During these years, the patient was consulted in various psychiatric offices but not on a regular basis. During this time, he did numerous medical investigations in his almost melodramatic attempt to discover the causes of his complaints.

CASE PRESENTATION:

Our patient is a 58 years-old woman which is admitted for the first time in her life in a psychiatry hospital for future

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investigations and with the purpose of a long-term hospitalization.

MEDICAL HISTORY

His medical history sends us 17 years back in time when the patient suffered an emotional „shock” which in that moment „didn't matter so much to him.” The initial symptom was the diffuse headache which rapidly degraded the patient's mental state.

Easy, with the passage of time, the patient learned to accept the headache and the bad general state treating himself with NSAIDs and a large amount of vitamins and anti-stress complexes, treatments which, after a period of time, began not to function anymore.

After 2 years of avoidance, the patient started the series of medical investigations consulting successively the neurologist, the cardiology office and the rheumatology one. The cerebral computer tomography (CT) didn't show any pathological condition and the rheumatologic tests were normal. The patient didn't present any somatic condition which would have interfered with that persistent headache and her multiple newly-appeared complaints of paresthesia, tingling, „a bunch of nerves” at the level of the extremities, the cervix-thorax and lumbar regions. None of the physicians who consulted him didn't give a clear answer and a certain cause of this symptoms, situation in which he turned to unconventional treatments. The relationship with the physicians was unconstructive and he denied to understand the fact that this problem could have certain psychopathological explanations. So, he rapidly headed to various therapies such as : Spa therapy, anti-stress massages, collective meditation and mindfulness programs, fitness, all the methods being encouraged by the doctors for the supporting and preventing in maintaining a healthy lifestyle. Because of the fear of being stigmatized by his friends and family he constantly avoided consulting a psychiatrist during all this time. Not succeeding to improve the intensity of the complaints which on the contrary, seemed to get worse, the patient starts consulting an outpatient-psychiatrist who diagnoses at that time with a mixed personality disorder and recommends an antidepressant and anxiolytic therapy in low-moderate dosages. The patient follows this type of treatment during a couple of months in which it didn't work to decrease the level of complaints.

Continuously refusing the psychiatric pattern of his conditions the patient resumes the medical investigations with a huge tour of various cities clinics trying again to receive the advice of specialists from Neurosurgery, Gynecology, Ophthalmology and Physical and Recovery Medicine, all with a frustrating verdict: clinically normal at that moment. Cervical spondylosis is the diagnose put by the neurologist, a condition that improves the patient's general state hoping for finding a possible cause of the occipital headache.

Seeing the „soul healers”, the local fortune tellers, crystal therapies or new german medicine specialists but also holistic and bio-energetic approaches lasts a couple of years, meanwhile the patient gives up the psychotropic treatment and also retires early from her job where he was an accountant at a private company. The stigmatization of psychiatric disorders and his probable psychiatric illness has reached the top of his beliefs in the meantime.

The unconstructive relationship appears also between him and his alternative therapists, regarding the lack of

improvement of his complaints. Being badly understood by his family and relatives and reaching a poor mental state again, he searches again a psychiatry service, a new one. This time, he came to our clinic presenting a low-depressant mental state, requiring further investigation.

PSYCHIATRIC INTERVIEW

The patient presents a careful outfit, appropriate hygiene, conscious, cooperative, temporal-spatial oriented, mimics and gestures normal, mild depressive mood, impaired attention and concentration, without any memory disorders. He denies any qualitative disorders of perception.

Rhythm and ideas flow in normal boundaries. Coherent narrative speech, centered on the somatic complaints. Depressed mood, diffuse anxiety, multiple somatoform complaints, low tolerance to frustration, mixed sleeping disorders, increased emotional lability, low useful yield, insight present.

The physical exam doesn't highlight any somatic conditions but the symptoms described by the patient is very expressive mostly regarding various paresthesia, tingling, „a bunch of nerves” which appear and disappear all the time at the level of the extremities, the cervical-thorax and lumbar regions. The general bad condition state includes feeling nausea and often vomiting, apathy and lack of energy.

The laboratory investigations include laboratory tests which show triglycerides-293 (N 0-150), Calcium ions-4,18 (N 4,50-5,50), ESR-50(N 6-13), Cholesterol-297 (N <200), Platelets-497 (N 150-400*109), TSH,FT4,HLAB27,Ac anti TRAB-negative results.

The psychological exam shows a MMSE of 27 of 30. The missing 3 points are from „The reproduction of information” section. The clock test-10/10, ADL-personal autonomy 6/10, IADL-social autonomy 6/8, GAFS 55/100 with the following conclusions: mild impaired cognitive loss, restricted area of interests, high emotional lability, low tolerance threshold on frustration, decreased capacity of self-care.

The native cerebral computer tomography(CT) reveals the lack of recent vascular modifications, lack of space-replacing processes at the infratentorial level or supratentorial. Liquid hypodensity sequelae at the left lenticular level, fronto-temporo-insular atrophy, the ventricular system located on the median line, no transparency modifications at the facial sinuses level, left mastoiditis.

Electrocardiogram-normal route

Electroencephalogram- no significant rhythm disturbances

Neurological exam- neurological clinically normal, cervical spondylosis

Ophthalmologic examination- diagnoses sicca conjunctivitis, presbyopia, low longsightedness both eyes.

PSYCHOTROPIC TREATMENT

Day 1- Venlafaxine 75mg/day, Gabapentin 300mg/day, Bromazepamum 3mg/day

During the first three days the somatic complaints don't improve and the treatment is modified towards increasing Gabapentin dosage at 600mg/day and Venlafaxine 150mg/day.

On the seventh day of hospitalization, the patient presents

moderate-high depressive mood and he complains that the admission in our unit doesn't improve his symptoms and expectancies and the CT result worsens his conviction of lack of heal and lack of improvement.

Next day, Quetiapine XR 50mg/day is added.

Days 14-15- the Quetiapine XR dosage is lifted up to 200mg/day and is added Pramiracetam 600mg/day with a thiamine/pyridoxine complex.

The somatic complaints slowly improve the next days and his affective state returns to the one in the first day of admission. He was focused then onto the relationship between the somatoform complaints and his emotions level, this revelation learned from psychotherapy as he said was worsening her anxiety state.

Day 17- Bromazepamum is increased to 6mg/day and Pramiracetam to 1200mg/day.

After a 18 days hospitalization the patient is discharged presenting real improvement in both mood area and somatic complaints. Also, the sleep overall improved and the impaired concentration slightly increased.

DIFFERENTIAL DIAGNOSIS

In this particular case the main differential diagnosis was made with the somatic delusion. We must specify that reality testing in our patient was in terms of normality and there were no major beliefs that would interfere with our patient's insight of the disorder. The psychological exam didn't highlight any bizarre or special thoughts or ideas about the etiology of the disorder the patient may kept hidden from us in order not to be stigmatized or not being taken seriously by his family.

A particular case of differential diagnosis would be with a somatic disorder that would actually cause the whole package of symptoms located unspecific at any cerebral level and containing high damaging pathology like hydrocephalus, brain tumors variously located, cerebral-vascular disorders, migraine, all denied by the computer tomography and other lab investigations.

Fibromyalgia syndrome was another exclusion diagnosis but the blood tests results and low-response to pain relievers and non-steroidal anti-inflammatory agents as the fairly good response to psychotropic drug treatment lead the diagnosis towards a psychiatric path even if fibromyalgia is nowadays a controversial topic among psychiatry and rheumatology, its classification, treatment or etiology still confusing certain specialists.⁽⁵⁾

A generalized anxiety disorder could have been a diagnosis to consider but the amount of somatic accusations and lack of paroxysmal exacerbations pleaded for another major cause of this clinical presentation even if anxiety accompanies the clinical picture.

DISCUSSIONS

This case was a great one because of managing difficulties considering the patient's reluctance towards psychiatric

approaches and the stigma towards psychiatry in general, in a mediocre socio-cultural context and a precarious basic medical education⁽⁶⁾. Our success consists of creating a strong doctor-patient relationship based on trust and rightness, benevolence and honesty, calling to a psychotherapist during all the admission period for helping the patient understand what's happening to his body and mind and how can we help in this situation.

Having an special strong belief in alternative medicine with its colorful and astonishing ideas, the patient overcame an important psychological barrier acknowledging the psychiatry matter of study in general and somatic accusations in particular.

The limits of this case are the evolution and the prognosis of the condition which will be affected by the tolerance threshold of the patient, the evolution of the structural modifications in the brain namely the cerebral atrophy and other possible psychosomatic issues that may appear into the future.⁽⁷⁾

CONCLUSIONS

This case represents a mixture of complaints of medical unexplained symptoms with and impressive affective allure which throw the patient and his family in an endless race of searching medical advices trying to improve his physical and mental state. The striking pattern was that of an enormous alternative methods of treatment and the whole time of using them just because of the fear of stigmatization. The frustrating purpose of this disorders is the acceptance of the psychopathological marks by the patient and this is, often, a tedious long fight of the family and physicians either.

The essential part is the further autonomous evolution of the cerebral changes which can anytime be highlighted by more computer tomography exams and MRIs to explain the complex etiology of this type of illnesses.

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