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Psychological Coping and Social Aspects in the Case of the Elderly with Metabolic Syndrome

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Abstract

The metabolic syndrome (MetS) represents a disease with a complex pathogenesis being associated with a constellation of metabolic and cardiovascular disorders, and not only, resulting from the co-occurrence of obesity, dyslipidemia, insulin resistance and type 2 diabetes mellitus, according to the American Education Guide “National Cholesterol Education Program Adult Treatment – Panel III”. We present the case of a 67-year-old patient, female, pensioner with metabolic syndrome diagnosed by the co-occurrence of stage I hypertension, grade I obesity, diabetes mellitus and dyslipidemia with hypercholesterolemia. People with MetS have a poorer quality of life, with references towards physical and social functions, regarding both general and mental states of health. With the help of a trained psychologist we interpreted the obtained results of the Freiburg Personality Inventory (FPI) and a Psychological Coping Questionnaire-Personal Needs Evaluation Questionnaire (V33A-GoldInc) and had a perspective upon patient’s views regarding her personal illness and the involvement of spirituality, socioeconomic status and ethics in the management of the metabolic syndrome as a complex pathology, and particularly of the cardiovascular component of the disease. Regarding the presented case, it is indicated that the social worker, within the inter multidisciplinary relationship social worker-psychologist-doctor, interferes more with elderly on informing them about different sort of abuses against them, the risks of exposing their personal lives excessively, the matter of trust both within society and medical systems through community projects and information campaigns.

Keywords: metabolic syndrome, psychological coping, self-management, health, depression.

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Introduction

Changes of a physiological nature within the human body have a real impact on the psychological state and health. On one hand biological frailty brings with it the feeling of incapacity that produces major changes in the self-image in the case of the elderly, and on the other hand, the aging of the neuro-hormonal system produces other changes in the manner of reaction with the familial and social environments, with the appearance of new adapting schemes and new methods of solving issues (Albu *et al.*, 2001). On the scale of most stressful events, the loss of life partner has a very high score, regardless the age of the person traversing this situation. As older as the person in cause is, as more difficult the adapting to the new status and life is and as much more painful and full of consequences is the psychological-physical state of the individual. The issue that the remained elderly partner confronts is mainly loneliness, even though this person has still the support and company of his left family and friends. The single remained partner loses a primary source of material support, help in daily activities, company and, also, a sexual partner. As the majority of individuals adapt to the new life after the loss of their partner, after a period of pain and mourning, a significant number of people experiment, on the other hand, a long-term depression (Albu *et al.*, 2001; Florea, 1998). At the old age this sort of depression is usually associated with melancholic states or the abrupt loss of energy. The characteristics of this sort of depression include a continuous pain felt in the body, lack of interest, lack of hope, low self-esteem, a deformed evaluation of the present and of the future. The elderly depressive persons usually confront with the difficulty of taking decisions of their own and become slow in thinking, way of talking and in movement. Some individuals still live a high grade of activity, finding it difficult to rest or remain silent. The psychological symptoms of depression can include loss of appetite, loss of weight, severe fatigue, constipation or diarrhea. They usually raise tension and anxiety can contribute to the construction of some agitation states (Fontaine, 2008). Due to the fact that some individuals refuse to feel sadness or depression (Ciucurel & Iconaru, 2012; Diaconu, 2011) they can traverse through certain psychological states easier than others. For a prosper reintegration of this sort of elderly within society there is recommended in the specialty literature a good relationship with the left family members: children, grandchildren, nephews, other relatives etc., walks outside with close family or friends, regular visits to the nutritionist and psychotherapist, sport in admitted limits, subscription to certain "clubs" for pensioners' meetings that offer these people ways of interacting with other persons of the same condition, escaping monotony and playing useful games, training their bodies and minds (Dumitru, 1984).

The metabolic syndrome (MetS) represents a disease with a complex pathogenesis being associated with a constellation of metabolic and cardiovascular disorders, and not only, resulting from the co-occurrence of obesity, dyslipidemia,

insulin resistance and type 2 diabetes mellitus, according to the American Education Guide „National Cholesterol Education Program Adult Treatment – Panel III” (Grundy, 2001). The MetS is associated with increased risk for cardiovascular disease such as hypertension, coronary artery disease or heart failure, due to the metabolic changes that according to several studies mainly affect the contractility of cardiac myocytes. On the other hand, researches suggest that obesity and type 2 diabetes can affect both the cardiac structure and function in an independent manner, regardless of hypertension or coronary disease. Two different studies (Frisman & Kristenson, 2009; Yoo, Kim & Cho, 2012) have demonstrated that people with MetS have a poorer quality of life, with references towards physical and social functions, regarding both general and mental states of health.

Social care has been associated with health care as being almost synonyms in many western health care systems including the British, the Swedish, the Norwegian and the Spanish ones, but in a manner that ignores main aspects of ageing. In the western health care and social care systems, the elderly population is mainly encouraged to be independent and active and “have influence in society and on their everyday life, to grow old in security , to be met with respect and have access to nursing and care”(The Swedish National Action Plan adopted in May, 2001). On the other hand the Spanish national report states that elderly are “dependent people who, for reasons related to the lack of or loss of physical, mental or intellectual ability, get the need for assistance or help, very important for them in order to carry out their daily activities”, making a correlation with a statement made by the European Commission (1998). The issues of dependence or independence in the case of the elderly remain seen as complex and controversial. The cases vary according to social dramas and old-age adapting (Johansson & Moss, 2004).

Material and method

We present the case of I.M., a 67-year-old patient, female, pensioner, admitted to the Vth Medical and Geriatrics-Gerontology Clinic of the University Hospital of the *Romanian Railroad Company*, Iasi, Romania, for MetS diagnosed by the concomitant presence of stage I hypertension, grade I obesity, diabetes mellitus and dyslipidemia with hypercholesterolemia, with a complex social background and status, as revealed by the geriatric evaluation, the parallel anamnesis files and the psychological investigations. Therefore, the patient was also investigated psychosocially, requiring social assistance and psychological support.

Results and discussion

The medical data from the anamnesis file revealed: the highest blood pressure was 160/100 mmHg, BMI was 34.3 kg/m² and waist circumference was 110 cm. According to the laboratory investigations, triglyceride level was 180 mg/dl, total cholesterol 220 mg/dl, fasting blood sugar 127 mg/dl, albumin -3.3 mg/mmol; also, HDL- cholesterol of 37 mg/mmol and elevated VLDL- and LDL- cholesterol indicated insulin resistance and microalbuminuria, characteristic finding in the metabolic syndrome. Obesity and sedentarism lead to insulin resistance, this having a negative impact on lipid production by increasing the VLDL- and LDL-cholesterol levels („bad cholesterol”) and decreasing HDL-cholesterol levels („good cholesterol”). Other important effects of insulin resistance are represented by increased levels of insulin and glucose in the blood (Livi, 2010; Coman, 2013; Karila, 2011; Mihalache *et al.*, 2012). Therefore, insulin excess usually increases renal sodium retention resulting in the high blood pressure in the metabolic syndrome. Also, the echocardiographic findings revealed diastolic dysfunction with delayed relaxation phase (Georgescu & Arsenescu, 2013). The therapeutical options that were opined in this case were: Perindopril - 5mg-1cp/day, Indapamid - 1,5 mg-1 cp/day, Amlodipina- 5 mg-1 cp/day, being recommended a low-salt, low-fat diet, no excessive physical activity and prolonged orthostatism.

Healthy lifestyle changes are the first line of treatment for metabolic syndrome. These include, firstly, a positive thinking, a powerful motivation which should represent the engine of future actions, for an insertion within social life, corresponding to this period of life. Finding a stressed occupation, according to personal capacities and existing energies, that could initiate the individual to move, imposing him/her an active living, with the shortening of periods spent in the house, respecting the therapeutically indications, through the proper timing of medicine administration, adequate hidration, a change in the report between the components of animal origin aliments and those of vegetal nature, losing weight, being physically active and quitting smoking represent components of a healthy living that should be embraced by any individual within a normal society. If lifestyle changes are not enough, medicines are prescribed to treat and control risk factors such as high blood pressure, high triglycerides, low HDL cholesterol, and high blood sugar. Administrating medicines in time reduces the risk of strokes and cardiovascular diseases, and patients should see a doctor regularly, especially at an advanced age (Johari & Shahar, 2014).

The geriatric evaluation takes place within the doctor-elderly patient relationship, representing a multidimensional and interdisciplinary process of diagnosis that reveals the elderly patients' medical, psychosocial and functional issues with the purpose of elaborating a successful therapeutical plan and a long-period monitoring. The geriatric evaluation reflects five different perspectives and components of the disease: a medical one, a functional one (daily activities,

Instrumental Activities of Daily Living-IADL), a cognitive one (the MMSE), a social one and an ambiantal one. The subjective accuses are usually multiple and various in the geriatric field which makes it difficult to establish the main pathology. The symptoms of the same disease may differ from patient to patient, the sensorial affections usually make communication difficult (Alexa, 2011: 307).

The social issue also seen from a bioethical perspective revealed the patients' vulnerability and personal needs in the context of abuse coming from close friends and family. The social case we present reveals the material damages and psychological abuse that two of the patient I.M.'s close friends caused her in the context of personal and immediate benefit and profit. Mrs I.M., ex teacher, presently pensioner, was asked by one of her friends -Mrs V.M to become guarantor on a recent bank loan, on the reason that she was a widow with a jobless son and that she needed the money for house repairing, promising her that this wouldn't have any possible effect or repercussions on her, the patient being still an active teacher by that time, and not a pensioner. Mrs V.M. also promised that she would be able to pay her credit, omitting intentionally to tell Mrs. I.M. that she was still having some other several credits in different banks and other people she had been using as guarantors.

The social consequences: Mrs. M.V. couldn't pay any of her bank rates and the bank, therefore, sent an advertisement to her guarantors to pay the monthly rates of her credit. Because the other guarantor she was having – Mrs P.I. wasn't able socially and economically to pay for the credit (Mrs P.I. –a single mother of a young boy, pregnant with her second child), Mrs I.M. – our social case- was suddenly confronted with the responsibility of paying herself only the left credit, in the conditions of having other credits herself at that same time and another son with a difficult social situation-not hired, because not wanting a job.

The social and psychological drama is revealed as follows: the Bank made a monthly deduction on her pension, as to make her pay her monthly rates. Regarding her particular social situation-pensioner, divorced, single mother, one deceased child and another one not willing to get hired, no other close family alive, in the context of the above mention unexpected payments, the patient developed progressive depression, social isolation (didn't get out of her house for approximately three weeks), episodes of anxiety and panic attacks. After this life changing event and the weakening psychological states she had been through, Mrs M.I., not a very religious person, even though being the daughter of a priest, thought to pray for a while before making any decision. She mentioned that after she had done this, she all of a sudden realized that she could sell a land she had inherited from her parents she forgot about. Her link with spirituality helped her discover a solution to her critical situation and she felt grateful. She wanted to rehabilitate and she required therefore, the services of both a social worker and a psychotherapist. Social assistance was useful because she received emotional sustenance and even got helped to find a position in a countryside school as to

continue her teaching career and to become more active within society. Social assistance represents the first form of intervention that exists as a modality of according social support from the oldest times. The existence of certain deficiencies at a mental level can determinate a maladjustment from a social and juridical point of view, fact that can affect the entire community. The psychosocial intervention represents a specialty that could be done only by specialists in the fields of social assistance, psychology and psychotherapy. Through their actions, these specialists have as target following both a modification of behaviour and its components or of the individual reported to the society (Sheikh & Cassidy, 2000). Because through functional social assistance, there is meant an assembly of institutions, programs, professionalized activities, specialized services of protecting persons, groups, communities with special problems, temporarily found in difficulty, that because of certain economic, socio-cultural, biological or psychological reasons, don't have the possibility of accessing a decent way of living. Regarding the presented case, it is indicated that the social worker, within the inter multidisciplinary relationship social worker- psychologist-doctor, interferes more with elderly on informing them about different sort of abuses against them, the risks of exposing their personal lives to much in front of friends and acquaintances, the matter of trust through community projects and information campaigns.

Additionally, through psychotherapy she regained her self-trust, was offered moral support and was helped to reintegrate within society. To test the ability and interest to cope with this complex disease, the patient was asked to fill out two psychological questionnaires-the Freiburg Personality Inventory (FPI) and a Psychological Coping Questionnaire-Personal Needs Evaluation Questionnaire (V33 A-GoldInc). With the help of a trained psychologist we interpreted the obtained results and had a perspective upon patient's views regarding her personal illness and the involvement of spirituality, socioeconomic status and ethics in the management of the metabolic syndrome as a whole, and particularly of the cardiovascular component of this disease.

In the case of elderly persons, diseases caused by stress, anger, frustration, sadness and chronic fatigue are more obvious and will mainly target that part of the body that is most weakened. Therefore, if the patient has cardiovascular diseases, especially those associated with the metabolic syndrome, after one day of normal activities he could be expected to present major symptoms or pains that could become unbearable (Cohen *et al.*, 2010). Studies in the Heart Disease Prevention Programme conducted by the *Division of Cardiology* at the University of California School of Medicine have shown that when associated with diabetes, cardiovascular diseases, such as hypertension in the metabolic syndrome, coronary artery disease or myocardial infarction have a mortality rate of 55 % in elderly patients and that in the last ten years the percentage of cases having as primary diagnosis a cardiovascular disease and a secondary of diabetes has increased by

37%. If the patient has a weakened immune system, then the chances to develop seasonal viral infections are higher, this contributing a lot to the deterioration of his/her state of mind and self-esteem resulting in the occurrence of depressive states, diagnosed as well.

Diseases that have a psychological basis but manifest at a physical level are known as psychosomatic affections. These are far from just imagined diseases, even though most doctors would say so. In other words, patients with psychosomatic disorders, as the presented case, have more developed sensory perceptions and feel easier their negative repercussions upon their body, expressing more often an emotional discomfort through nonverbal language, physical disease, than verbally. According to the latest researches in this field, this process is known as somatization and consists of a series of sensations and symptoms of a disease and physical affection that affect weekly approximately 80% of the patients with associated disorders. Somatization represents the way in which the psyche of a person tries to say that it feels emotionally overwhelmed. Instead of using the words: "I feel frustrated/anxious/fatigued because..." the person communicates this through a physical discomfort and the presence of various symptoms which make us wonder „if we are not possibly very much ill?" The symptoms of somatization are, therefore, very annoying and dangerous, according to the first evaluation based on a FPI, a multiphasic personality questionnaire, constructed by the combination of a classical psychological system with another extracted from psychiatric nosology. It can be used in both clinical and the non-clinical field. The FPI contains 212 items grouped in nine scales, at which for obtaining a more complete image of the investigated personality, the authors have added another three scales. The content of the questions in the questionnaire refers to stages of mind and behaviors, attitudes, habits and corporal accuses. The content of FPI questions has at its basis the factorial study of items and their grouping within nine factors that describe the personality dimensions within the questionnaire. Its interpretation requires the usage of behavioral descriptions which explain the two poles of each scale and which are shown in the test. Moreover, the study of the correlations between the scales of the questionnaire establishes certain relations among them, fact which allows a more nuanced interpretation.

Using this test in our patient high scores was obtained for psychogenic neuroticism (72%), somatic neuroticism (87%), depression (80%), anxiety (70%) and emotional lability (80%). The low calculated scores for aggressivity (20%), sociability (18%), normality (20 %) and extra-introversion (40 %) led us to the formulation of a clinical framework. The elements of depression and anxiety are associated with and accentuate the neurotiform and psychogenic somatic manifestations. This results in a worsening and extension of the objectively established somatic disorders. The clinical course can be unfavorable. This fact is supported by the results obtained with the Coping Mechanisms Inventory, a tool for psychological research and diagnosis that helped highlighting the extremely important

elements of behavioral responses to illness, or stressful situations (personal, social or familial).

The distortions in information processing, redefining the stressful situation with the intuitively-accepted terminology, develop, in a cognitive vision, an adaptive value that is important. Sometimes there is a discrepancy between what the threatened subject establishes within him/herself and the exigencies of the demand. Perceived from outside as self-deception mechanisms, the coping techniques of this type are frequently seen in clinical cases. Overestimation of healing chances and minimizing of symptoms of poor prognosis (e.g. marked weight loose in the case of a cancer patient, etc.) or the unjustified optimism, generically named positive illusions, would have a true modulating contribution in the relation with the stress caused by disease.

Stone and Neal (1984) attempted to develop an instrument to assess daily coping and established eight categories that were labelled (a) distraction, (b) situation redefinition, (c) direct action, (d) catharsis, (e) acceptance, (f) social support, (g) relaxation, and (h) religion. The used questionnaire is based on Folkman and Lazarus' concept that proceeded in 1985 to a diversification of the structure of coping into eight factors: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, and positive reappraisal.

Our patients investigated with this questionnaire showed marked tendency of distancing (85%) and escape-avoidance (84%). For problem solving (the problem being her disease) the obtained score of 14% was suggestive for a tendency of acting disorderly, important in terms of treatment compliance.

The dimension of social life has important repercussions on the psychological life, whether we talk about a single individual or a community, a society as an assembly. The common purpose and the inter-connexions between social assistance, psychology and psychoanalysis lead to what it is called psychosocial intervention with a trans-disciplinary character, found at the intersection of several other fields such as: anthropology, religion, ethics, sociology, psychiatry, law. It is strongly considered in the present literature that the psychosocial intervention belongs to the field of social assistance, because this relatively new field but with strong moral fundamentals is found at the intersection between the psychological component and the social component, due to the relationship of interdependence between the two. The psychoanalytic intervention involves not only time, but mainly a detailed, thorough knowledge of the patient, in the idea of identifying the hidden or unknown causes that led to disease. Factors of social, familial or economic nature are for the psychosocial intervention a source and a cause of various imbalances (Szamoskozi - Roth, 2003).

Conclusions

Our study reveals that in the majority of patients suffering from severe metabolic and cardiovascular diseases, and not only, besides detailed clinical and laboratory examinations, a psychological investigation performed by a clinical psychotherapist is required because there certainly is a psychological component (anxiety and even depression) that worsens the patient general status (Alexopoulos, 2005; Tyrer & Baldwin, 2006). The support of a psychotherapist makes the patient more compliant to the allopathic treatment, and patient's awareness of the psychological aspects of severe diseases leads to a better cooperation and doctor-patient-psychotherapist relationship. What makes it difficult for most doctors to make a correct diagnosis in these persons is the fact that they are used to search for (and to find) a physical cause. In most of the cases, the psychological component is present and the medical practitioner should go deeper into the causes that led to the investigated disease, this being possible only with the help of parallel records of a specialized psychotherapist or psychologist (La Rosa, Le Clesiau & Valensi 2008). For prescribing an efficient treatment, identifying the source of stress in patient's life is necessary. Taking into consideration the psychological component in our discussion case, ending anxiety and depression, the physical affections (referring to the cardiovascular and the metabolic ones) will considerably diminish (Parks & Marek, 2007). The psycho-social intervention represents a modality through which the specialist, whether psychotherapist, adviser, or social worker, intends to highlight certain facts and realities that require to be modified or re-evaluated through a distinct perspective, from an ethical point of view, as well. They put accent on the moral dimension that lays on the background of the social misbalances that contribute, in the end, to psychological disturbances. This interdependence created leads to the necessity of a complex intervention-social, psychological, economic and cultural. Regarding a person that because of poor state of health becomes isolated, with communication and financial issues, there is put into discussion the subjective perspective of the matter, but mostly the existence of a psychosocial problem through its repercussions.

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