

RELEVANT PSYCHO-SOCIO-MEDICAL ASPECTS IN CROHN'S DISEASE. THE NEED OF PSYCHOTHERAPY. CASE STUDY**DOI:** <http://doi.org/10.26758/10.1.5>

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Abstract

Objectives. Crohn's disease (CD) and *Ulcerative colitis (UC)*, the main Inflammatory Bowel Diseases (IBD), need surgery in many cases, despite the treatment. This study aims to extend the knowledge regarding the psychological component of IBD.

Material and methods. In 2015, eight questionnaires were filled in and deep psychosocial anamnesis, semi-structured interview and observation were performed, to reconstitute the biography and critical incidents of a patient suffering from IBD since 1978.

Results. During the analysed period, the patient was under the impact of five main negative stressors: death of a close relative, illnesses, marriage, changes of the eating habits, and difficulties in her own personal achievement which were experienced as catastrophic and humiliating. The patient's life story indicates perfectionism as an irrational self-defeating belief. The anxiety was slightly elevated according to Hospital Anxiety and Depression Scale. By Woodworth-Mathews Personal Data Sheet, except for the score from instability that was normal, scales limit scores were recorded for the other 7. Scores to Aggression Questionnaire were medium at the physical one and high at the verbal one. Jenkins Activity Survey has revealed that the patient is never late, is too active and acts immediately under stress.

Conclusions. The treatment strategy for IBD patients should be based on a multidisciplinary approach involving the gastroenterologist, nutritionist, surgeon, family doctor, and the psychologist. The psychologist should explore the lifestyle, existential major events, perceived stress, coping mechanisms, etc. of which might draw conclusions regarding the onset and the progression of the disease.

Keywords: Crohn's disease, Inflammatory bowel disease, personality traits, psychosomatic, stress.

Introduction

Crohn's disease (CD) and *Ulcerative colitis (UC)* (sometimes called ulcerohemorrhagic rectocolitis – RCUH in the Romanian medical literature), the main Inflammatory Bowel Disease (IBD) are chronic inflammatory bowel disorders characterized by alternating periods of remission and periods of inflammatory activity and symptoms. Common symptoms are: diarrhea, weight loss, abdominal pain, and sometimes gastrointestinal bleeding. Diagnosis is established based on corroborating clinical data, biological, imaging, endoscopic and histological results (Gheonea et al., 2010). CD can affect any segment of the digestive tract: the favourite location is the ileocecal area. Inflammation in the affected segment involves all layers of the wall,

and sometimes extends to the tissues or organs in the neighborhoods (Hendy and Hart, 2013; World Gastroenterology Organisation, 2015).

The study "Romanians, lifestyle and gastrointestinal diseases" ("Românii, stilul de viață și bolile gastrointestinale") conducted by online interview (or CAWI: Computer Assisted Web Interviewing) in May 2015, on a sample of 3,166 respondents aged over 18, urban Internet users, has revealed that over 81% considered IBD as "serious and very serious" and that over 83% said that the need to use the toilet up to 20 times affects the personal and professional life "much" and "very much" (Association of People with inflammatory bowel diseases in Romania, 2015).

The defects of Paneth cells, which mediate immunity and maintain the small intestinal epithelium, have been observed in high proportions of patients with CD, and are associated with a more aggressive CD phenotype (Stappenbeck and McGovern, 2017). A correlation between Paneth cell phenotypes, microbiome, and transcriptome profiles were observed in IBD patients (Liu et al., 2016).

Gut bacteria, fungi, and viruses mediate mucosal homeostasis via their composite genes (metagenome) and metabolic products (metabolome); under conditions of dysbiosis, alterations to their profiles and functions contribute to inflammation and effector immune responses in IBD (Sartor and Wu, 2017).

The risk of IBD in genetically susceptible individuals continues to increase especially in industrialized societies as a consequence of diets and environments which affect the intestinal microbiome (Kaplan and Ng, 2017).

Improving the sanitary conditions has reduced exposure to microorganisms, especially in industrialized countries, and increased immune reactivity which lead to autoimmune and allergic diseases (Okada et al., 2010).

A factor in the pathogenesis of IBD is an alteration of the intestinal microbiome, and the Anti-Inflammatory diet could be an adjuvant in reducing inflammation (Olendzki et al., 2014).

Besides the studies regarding the role of the genetic predisposition in IBD, more and more numerous are the studies concerning the environmental factors involved in the autoimmune diseases. Vitamin D deficiency affects the antibacterial response, regulation of adaptive and innate immunity (Ardesia, Ferlazzo and Fries, 2015).

Correlations between CD and smoking have been established (Karczewski et al., 2014) and between CD and obesity (Harper and Zisman, 2016).

Inherited genetic variants may also explain disease location, *differential side effect rates* and response to therapy (Cleynen et al., 2016). In fact, recent data shows the influence of anti-TNF treatment on mucosal gene expression profiles in IBD (Milanesi et al., 2019).

Helminths (parasitic worms) may modulate the bacterial composition of intestinal flora and have suggested the benefit of helminth therapy in IBD (Versini et al., 2015).

In Crohn's disease over time intestinal complications occur (Thia et al., 2010). After the first surgery, almost half of the patients can develop intestinal complications requiring new bowel resections (Fiorino et al., 2016). CD surgical indications are represented by complications such as stenosis or fistulae in the digestive segments and anoperineal region. The types of surgery depend on the type of complication, and may be required resections of segments, with ileostomy or colostomy which can be temporary to relieve the local inflammation before applying anastomosis, or sometimes definitive when digestive continuity cannot be provided because of severe injuries which do not allow digestive anastomoses (Hwang and Varma, 2008).

The irreversible deterioration in CD is due to fibrosis, elucidating its development mechanisms could be possibly leading to the implementation of antifibrotic therapies as in liver disease (Rockey, 2008; Colombel and Mahadevan, 2017).

Under these circumstances becomes essential the early diagnosis a better control of the disease aiming at obtaining sustained deep remission (Danese et al., 2014). For these reasons, the

collaboration between gastroenterologist and surgeon is essential for the therapeutic success of such patients (Mihai et al., 2010).

There are two types of therapeutic approaches reported for the IBD patients: step-up approach and top-down approach. The first refers to progressive escalation of the potency of the used drugs according to the loss of response to certain molecules. The second consists of a potent active intervention from the start with the most effective molecules to induce faster remission and to limit the damage produced at the intestinal level by the active inflammation. Mainly for economical reasons, step-up approach is used, including in Romania (Rogler, 2013).

Little has been written about the psychosocial aspects of IBD which might have an important effect on the patient management outcome (Husain and Triadafilopoulos, 2004; Gracie et al., 2017).

This study analyses the relationship between psychosocial factors, on the one hand, and the pathogenesis, clinical manifestations and response to the treatment on the other hand of a CD patient.

Methodology

Starting from the hypothesis that the debut of the disease, the flare-ups and the symptoms are closely related to the bio-psycho-social factors, during 2013 and 2015, 33 patients with IBD completed eight questionnaires as follows.

An Omnibus survey was created and used, with open and closed questions, divided into four sections: 1. Socio-demographic data, 2. Sex, Sexuality, Gender, 3. Relationships, Family, 4. Health. Then, there were applied the following psychological questionnaires: echogram of communication style that assesses the use of the ego states (De Graaf and Kunt, 2010), Hospital Anxiety and Depression Scale (Zigmond and Snaith, 1983), Woodworth-Mathews Personal Data Sheet with 76 items (Dafinoiu, 2016), the Aggression Questionnaire (Buss and Perry, 1992) the Schmieschek Questionnaire for accentuated personality traits with 88 items (Rada and Ispas, 2016), 13 items from the Jenkins Activity Survey (Jenkins, Zyzanski and Rosenman, 1971) and the Family Adaptability and Cohesion Scale III (Rada and Olson, 2016).

The qualitative assessment was performed by anamnesis, semi-structured interview (based on an interview guide) and observation, with the aim to reconstitute biography, to analyze the social and educational conditioning of the personality, to reveal attitudes, conflicts, feelings, critical incidents of the environmental conditions, the subject's own way of communication, the effects of past experience and their influence on presence, as well as the objective somatic changes.

The questionnaires were handed out by the doctor to the patients during hospitalization for diagnostic and evaluation. The qualitative assessments were carried out by the psychologist-psychotherapist in the psychology department.

Written informed consent was obtained from all individual participants included in the study. These evaluations were carried out on a voluntary basis for all the involved parties. The subjects were informed that they could withdraw from the study at any stage, and they were ensured of confidentiality.

All procedures performed in the study were in accordance with the 1964 Helsinki declaration and its later amendments or comparable ethical standards and was approved by the Ethics Commission of "Francisc I. Rainer" Anthropological Institute of the Romanian Academy No 2/26.04.2013.

This article examines some psychosocial elements, the role of the psycho-emotional stress in initiating and maintaining mucosal inflammation in a patient with CD. These interview sequences are published with the patient's consent.

Case presentation

The history of the patient's disease

After 3 months of severe diarrhea (10-20 stools per day with blood), fever, gastrointestinal and urinary tract infection, 8 kg weight loss, a female patient (CPR) is hospitalized in 1978 and is diagnosed with ulcero-hemorrhagic rectocolitis. The prognosis is reserved; the patient is fed exclusively parenteral for about a week. After three months of hospitalization, she responds to the treatment with antibiotics, prednisone, sulfasalazine, B vitamins. Subsequently, she undergoes a treatment with corticotherapy for one month, with sulfasalazine for 3 years and eats mainly mashed food. Between 1981 and 1996, she has no Inflammatory bowel disease problems at all, and does not take medication. In 1996, a gastrointestinal and urinary tract infection occurs and the colonic inflammatory disease relapses; since then the remissions have been short and never like those in the fifteen-year interval. Because of the great pain at colonoscopy the investigation can only be done up to 20 cm from anus. In 1998, the patient has a severe flare-up with similar manifestations to those at the beginning that required hospitalization. The colonoscopy, performed up to 30 cm of anus and the histopathological examination showed nonspecific chronic inflammation, edema areas and exulceration. Since that year, the colonoscopy has been done under deep anaesthesia. In 1999, 2001, 2004 the patient has other flare-ups, with about 10 loose stools daily, low grade fever, abdominal pain, arthralgia. The colonoscopies have led to the diagnosis of pancolitis, colonic Crohn's disease (infiltrative pattern, anal prolapse, ulceration, polyps). The treatments were represented by corticotherapy - for about 2-3 months, sulfasalazine, mesalazine, ciprofloxacin, metronidazole, iron. By 2008, the patient has around 5 stools, bloating, and moderate, recurrent, prolonged abdominal pain. In 2008, the patient needs hospitalization for a feverish state, diffuse sensitivity to palpation abdomen, bloating, flatulence, severe abdominal pain and semi-consistent 5-6 stools. The colonoscopy revealed continuous lesions for 70 cm from the anal verge with luminal narrowing. The diagnosis is of idiopathic inflammatory colonic disease, probably ulcerative colitis, extended to the left colon. In addition, to tablets of mesalazine, rectal suppositories and suspension, Azathioprine is introduced into the scheme of treatment. Until 2011, she takes mesalazine and azathioprine. Her condition improves, but three months after the end of treatment in 2012, CPR has a severe flare-up with a weight loss of 12 kg (38 kg at 152 cm) and modified stool pattern consisting of difficulty in defecation with bouts of diarrhea on an infectious background of E coli. The treatment consists of mesalazine and Sinergin™ (a prebiotic containing oligofructose-enriched inulin). In 2013, major difficulties arise at defecation, with painful bloating, and occasional vomiting. The colonoscopy indicates erythema and ulceration, and 20 cm far from anus a tight stenosis does not allow any further investigation. The histological analysis of the biopsies from the colonic stenosis reveals no malignancy criteria. The computed tomography (CT) shows changes with infiltrated appearance to the junction with the descending colon. The treatment (micro enemas with budesonide for one month) leads to medium improvements. The diagnosis of Crohn's disease with colonic stenosis and subocclusive syndrome is made, and the doctors recommend surgical intervention. The treatment consists of rifaximin, inulin, trimebutine maleate. The blood tests show a strong biological inflammatory syndrome. The surgery is postponed and initiation of corticosteroid therapy and surgical consult are prescribed.

The patient continues to have difficulties in defecation, acute abdomen, severe abdominal pain, and can only eliminate the stool if this is very soft. In 2014, the Nuclear Magnetic Resonance indicates stenotic lesions on the sigmoid colon and the descending colon from about 15 cm from anus with a length of about 13 cm. The treatment consists of corticosteroids, antibiotics, azathioprine, prebiotics, probiotics and analgesics and antispasmodics when necessary.

In 2015, a biological treatment with adalimumab is introduced, but after the second dose feverish state, arthralgia, difficult stool evacuation and diarrhea, a rash on the arms and in the

perineal appear. The lack of clinical and biological response leads to the interruption of the treatment and surgical consult is recommended.

In 2015, the attempt to dilate the rectal and sigmoid stenosis fails because of the active deep ulcers, and the active inflammation of the lining: 12 cm from anus a tight stenosis is detected. A treatment with infliximabum starts. The pediatric colonoscope cannot get further than 15 cm from anus. The abdominal and pelvic magnetic resonance imaging (MRI) with contrast agent, conducted after the fourth administration of Infliximabum shows a parietal circumferential thickening narrowing the anal canal, with a maximum thickness of 7 mm located in the superior rectum and sigmoid stretching over a distance of 11 cm, and a mild thickening of the descending colon. The surgeon's recommendation is a rectocolonic resection of the lesions, with rectum amputation and permanent colostomy, which the patient postpones. Currently CPR is on the ninth dose of Remicade. Analyses show that that the patient responds clinically and biologically to the treatment with Infliximabum in combination with azathioprine, she has gained some weight, she has not had any other obstructive symptoms and she manages the intestinal transit by the means of pre/probiotics and alimentation. Tumour markers have normal values. There are signs of colonic stenosis, but the patient postpones the surgical intervention.

Socio-demographic data

When she was interviewed, CPR was 58 years old, with higher education, was living in the urban area with her husband whom she married when she was 31 years old and did not have any children. The average income of family per month was between 600 and 1000 euro. She considers that she has a good relationship with her husbands, even if in the beginning their relationships were quite tensed.

The description of the manifestations and the assessment of CD impact on the patient

CPR considers that in the past her disease greatly affected her work, family life and to some extent her sexual life and that currently is still affecting her work and family life. The following passage from the interview highlights the physical and psychological stress experienced by the patient during the active period of the disease:

I do not want to think about how terrible it was to go at least 10 times a day to the toilet. All those terrible abdominal pains that I had...When I got sick for the first time I was 21 and I could not enjoy anything from the common pleasures of that age and I used to watch sadly all those vivid people around me.

I look in the file with the history of my illness and I wonder how I have not lost my mind for so much suffering. This disease has incapacitated me and I have fought hard not to get out of the race and lead a life comparable to those people in my category. During the day, going to work was a real problem as the imperious need to go to the toilet could occur anytime and I could not have found a place to go. The worst thing was when the night sleep was interrupted several times for defecation. I remember that in the last two years of college when I had to go to examinations I could not eat before, I was anxious to be performant, I was suffering because of my belly and I was thinking of my duties at the job that I had to solve quickly as nobody replaced me during that free week that I could afford. At work it was a problem because I had to interrupt my work at least 6 times during the day, moreover, the toilet might have been occupied. Sometimes during meetings or while teaching to the students I had to stop in order to go to the toilet. I always had tampons, two pairs of underpants on me to help me in case I stained myself. My daily main concern was to identify the places where I could go to the toilet and the shortest ways of access.

I wanted so much to keep up with my fellows and I made efforts to attend conferences abroad at least twice a year. A few days before and during the journey I used to eat scarcely and only mint

tea with stale bread. Every time I returned stumbling as I was very weak. I could not share the hotel room with any colleague because I bothered them as I had to go often to the toilet. I remember the delegation in Paris in 2005 when my colleagues went sightseeing, enjoyed what they saw and I had to suffer from diarrhea, abdominal pain, although I was on prednisone. And so were all the departures. It seems that I decompensated stronger on the road, but I could not give up totally that activity so necessary to my CV. Any departure outside my residence city, even the holiday, created me anxiety because of diarrhea and pain. For 15 years I have been eating and drinking anything that helped me to be constipated and now I have to take care not to be very constipated because of the danger of an intestinal occlusion. Except for the 15 years when I was healthy, the rest involved mostly suffering and running.

Relevant psycho-socio-medical aspects for the disease; the stress

The interview has revealed that in the period before the onset of the disease and in the period of disease flare-up, around 1978 and about the beginning of 1996, the patient CPR felt stress because of several causes and for a longer period of time as follows:

a. The failures to college admission that preceded the disease: the emotions and the interpretations of this situation are described briefly in the following sequence of interview:

As my mother was a paediatrician, the idea to attend the Faculty of Medicine came naturally. When I failed the exam, with the shameful score that slightly exceeded 7, it was a disaster. At the time, for the admission to the Faculty of Medicine, there were around 25 candidates per place, the last admission score was about over 9.50. Out of my graduation fellows, only six were not admitted to faculty. When I failed to pass the faculty admission exam, in our family was a real mourning. I spent a year at home to study, then I got a job and I failed for the second time and for the third time. My father resigned. My mother started to tell me how ashamed she was when she went to the hospital and was asked about me, to say that I was not admitted to university college. I had become a sort of black sheep of the family, in comparison with my cousins who followed the usual route – graduated a higher education, got married, had children. An oppressive atmosphere was in the house, the discussions with my mother were always reproachful, she made apropos remarks that the students came home on vacation. Finally, we understood that I should have taken some private lessons to prepare for the admission exam... but I had got tired because I was afraid of a fourth failure. Until 1994, when I decided to try again to enter to a university college, I had obtained a lot of qualifications, I had graduated from post-secondary schools, far from my hometown, and all were insufficient for my mother's standard, but also for mine. The jobs of barman-waiter and cook-confectioner caused me a lot of troubles.

b. Leaving her parents and her provincial hometown for a big city to attend some schools and the emotional suffering related to that period are captured by the following account:

After the three failures to enter the college I left home (a provincial mountain town) to attend three-year school of public food service and one of hospitality. They were serious international schools, I was studying two foreign languages, I had escaped from that provincial town where everyone knew my failures. However, it was not very good; I was not satisfied with the environment in which I moved: waiters, cooks, and bartenders. When at a conference at which I had to serve I met a former teacher that I knew as a family acquaintance, I felt like fainting because of shame. Two years of study had already passed and I could not give up because I would have had to pay for my schooling.

After a while, I began to have diarrhea and a strong infection that was not cured by antibiotics. The doctors told me it was because of the water. I lasted for 3 months: I had atrocious abdominal pain, I could not retain the stool, I could hardly eat anything, and it was really difficult to attend classes. I was 21 and instead of having fun, and enjoying life, I was lying in the hospital for 3 months. My father told me that the doctor did not want to receive the financial gift saying that

he could not guarantee my life. My mother never came to see me because she had some health problems and went to stay at her mother for a while. Finally, I managed to pass all the exams and to graduate from that school. I worked in a big restaurant, earning better than my father and mother, but I had an internal suffering related to my professional pride that came from my mother. I felt uncomfortable because of my work environment and sometimes I was crying all night long. A big problem was that I slept for a long time in a sitting position in the armchair, I had big pain and painful erythematous nodules on the calves. With interventions I managed to get some approvals to work only in hotels, an activity that I and my parents, especially my mother, succeeded to accept.

c. Treatments against infections, acne, and for fertility are presented below:

Up to 12 years in winter, I almost always used to suffer from purulent tonsillitis with high fever. At that time, the antibiotic was penicillin. The injections hurt so bad that I started to refuse to stay still for the treatment so that my mother had to immobilize me with her leg. The kidneys and the heart were affected so tonsillectomy was necessary. Then, I was given a three-year treatment with moldamin for Sokolski-Bouillaud rheumatism.

After two years of marriage we decided to have a child, but I could not get pregnant. At that time, there were no treatments like today, and the recommended treatment was diclofenac. I took it for about a year and we struggled, especially I, with some grease. Finally, I had two miscarriages at 3 and 4 months. In fact, we were both almost sterile. In my case, it was because of the drugs I had to take for my colon disease and in his case, from a varicocele. Then, I suffered from acne with pustules like furuncles for which I took antibiotics; I was treated with autovaccine for long.

d. Her efforts for the career, her frustrations and the health consequences are captured in the next interview excerpt.

My mother in law always reminded me that her son had college and I did not. To fill my time, to get over my sadness, but especially to fulfill my "mother's dream", in 1994, I entered a college and 14 years later I defended a PhD (for confidentiality we specify only that both are in a field related to medicine). As it was part-time, the faculty lasted for six years. It was hard because I had a job where I could not take a continuous leave for more than one week. I studied enormously so that I pass all the exams because at 37 years I could not afford to re-examination. Out of fear of making mistakes, I was studying till exhaustion, and my social life almost inexistent. For that ambition, I graduated as a valedictorian, but also sick for life. In the penultimate year of college, in the summer of 1996, I was in session and after I found out that I was the only one of that year of study who had managed to obtain the highest mark (10) at the most severe professor who had made more than half of my classmates fail, I "rewarded" myself with an ice-cream from the dispenser, which triggered a urinary infection and colon infection. Thus, I resumed the ordeal with the disease.

On the main routes to home or to where I had to go, I was familiar with all the possible toilet places. Anyway, I reduced to minimum any outgoings, except for those required by the job, because of diarrhea that ceased only for a little while. I had a draconian regime and only the prednisone helped me overcome the crises. I was obsessed with cleaning because of possible infections which I used to catch easily. I had many treatments with antibiotics. I followed my treatment and my diet strictly, but it was in vain.

For quite long I had three jobs where I fulfilled my tasks with maximum conscientiousness. I always had the feeling I was not good enough, that I always had to add things in my CV. I lived dramatically the injustices at work and scarcely could I tolerate those who did not match the performance required by the professional pace. At one point, I started to have a fluttering throat, hair fall and other symptoms that made me have my thyroid investigated. Because my thyroid hormones were in good parameters and the doctor had told me that I had nothing, I insisted and asked her several times what she believed to be my problem. She told me irritated: "madam, can't you see that your cortisol is as big as China, take it easier".

During 2011-2013, I won a scholarship in a competition which involved spending three months abroad. It should have been a blessing, but for me it was an ordeal because of diarrhea. My belly was like that of a 9 month pregnant, and I did not eat in order to go less to toilet. I returned to Romania with 38 kg when I saw myself naked in a large mirror I burst into tears.

I always hated to go to the hospital and I avoid as much as possible to be hospitalized as this provokes me fear, sadness, concern, which is why I try to fix everything as an outpatient. When one of the gastroenterologists told me reproachfully that I neglected my health, as if I were somehow guilty that I did not react well to the treatment he had prescribed me, I wanted to tell him to his face... I had been having a correct lifestyle, I had quit smoking for over 15 years, I had been followed precisely all the treatments, I had tried all the complementary treatments ... what more could I have been done? Now, I realize the only one thing I have not done: I have never rested in the real sense of the word. I have been carrying with me, in me, all my career ambitions.

Last month, I was looking in my files with documents for a diploma I needed to participate in a competition for promotion. I experienced an ambivalent attitude: on the one hand the pride of so many schools, masters, scholarships, and on the other hand, the revelation that if I had to get this part out of my life, it would not remain much to enjoy.

Asked about the saddest events in her life, CPR said that these were her mother's lung cancer in 1998, the death of her father in 2000 and of her mother in 2002. Here is the short description of these events the patient provided.

My mother's diagnosis of lung cancer came as a thunderbolt. Not smoking, not drinking, not working in a toxic environment, she lived in the mountain fresh air, she was a person who did not upset anybody on purpose.... For a year, my father and my mother came from the province, for 120 Km to the hospital, for my mother's chemotherapy. Everything took place in the most silent and discrete way as possible so that they did not disturb me. After a while my father died in sleep, because of a cardiac arrest. With my dad I used to talk on the phone every day, I held counsel with him in everything. When I found the news out I yelled, I mourned with words. It was a shock as if I had lost my mind. When I arrived to prepare funeral duties, I lay next to him in bed to warm him up. The main provider of care, affection, and dialogue was and remains my father. My mother was a colder person, probably bored of the children in the hospital where she worked. Then my mother did not want to live without my father any more, refused any treatment and entered a sort of hunger strike; she died in my arms.

Emotional feelings, the need of psychotherapist

When asked how she feels, how she normally reacts when someone violates her boundaries, contradicts her, and does not appreciate her, she answered that she feels upset and angry. An excerpt of the interview is below:

Now I've got over it a little bit, but before, I was always on a defense position, losing much energy to prove I'm right in the most elegant possible, although I was boiling inside myself; I felt like throwing something in the head of that person that had done me an injustice.

The patient was asked what she thought to have triggered her disease and she answered:

I think my main enemy was my pride that my mother instilled and my emotionalism. At the transition from middle school to high school, at the graduation exam in high school, I had diarrhea and I vomited. That time, my mother reproached me that I had eaten apples and green apricots and those had made me sick.

CPR confesses that several times some series of individual or group therapy helped her become more confident, and calm down.

Significant results from questionnaires

CPR's echogram of communication style has revealed that the patient uses mostly Critical Parent *ego state*. Hospital Anxiety and Depression Scale did not indicate depression, but anxiety was slightly elevated. By Woodworth-Mathews Personal Data Sheet, except for the score from instability that was normal, at all the other 7 scales were recorded limit scores which indicate neurotic tendencies, the tendency to develop emotional, obsessive (psychasthenia), schizoid, paranoid, depressive, hypochondriac, antisocial, impulsive and epileptic behavior. Scores to Aggression Questionnaire were medium at the physical one and high at the verbal one. The scores to The Schmiechek Questionnaire for accentuated personality traits were normal. Of the 13 items from the Jenkins Activity Survey, was identified the following: when under stress pressure CPR, does something immediately, she is never late, the world and her partner tend to perceive her as authoritarian and competitive, her spouse considers her too active and says she would need to take it easier, she thinks she is more precise than the others and generally takes life more seriously. The scores to FACES III indicate a balanced family type, with average scores for cohesion and flexibility.

Discussions

CPR had recurrent infections and treatments with antibiotics were administered to her many times and for long periods, repeatedly. Studies have highlighted that a cause of dysbiosis may be exposure to antibiotics especially at an early age (Becattini, Taur and Pamer, 2016; Zeissig and Blumberg, 2014).

Perturbation of the microbiota increases the risk of allergic disorders, secondary infections, spread of drug-resistant pathogens, intestinal inflammations, obesity, and could affect the physiology of most host organs, even the brain (Caballero and Pamer, 2015; Luna and Foster, 2015).

In addition, CPR had for a long time a treatment with Nonsteroidal anti-inflammatory drugs, which may have been involved in the formation of lesions in the colon.

One aspect that requires further exploration and much attention regards the fact that the treatment was totally discontinued and we cannot know whether this might have contributed to the reappearance of the intense symptoms of the disease.

CPR engaged in obtaining a university degree about 18 years later than usually and entered in a race to recover this deficit of time. The difficulties, the obstacles in achieving school performance experienced by the patient as catastrophically and humiliating, as well as the high standards, perhaps too high at that time, regarding her career, were the main elements which she had to face during the disease. It should be noticed that the suspension of excessive activities has led to a longer period of remission. It also might be deduced that the departure from her parents, the change of the environmental factors, from the fresh mountain air to pollution, and the water change were not favorable to the patient. In addition, it is possible that the patient should have had a biological terrain, perhaps a genetic predisposition, with a sensitivity at the level of the colon taking into account the fact that, since childhood, she had experienced digestive disorders when changing environment, when traveling or when experiencing high emotions.

The common emotion of the patient was anger, and the inner negative dialogues were connected to the performance anxiety, to the fear of failure.

Analysing the case of CPR from the perspective of Rational Emotive Behaviour Therapy taking into account ABC(DE) Model (Dryden and Branch, 2008), the following conclusions have been identified. (A) The activating event was almost each time a challenge connected to performance, a real exam or a problem considered as an exam. The trigger of CPR was any risk that might have damaged her image in front of others. (B) The beliefs regarding the event or her

capacity were most often irrational. In the patient's accounts can be identified all the basic forms of the irrational beliefs: rigid expectations from herself, from the others and from the world and the derived forms of irrational beliefs: catastrophic thinking, intolerance to frustration, overall negative evaluation and the patterns of thinking like "everything or nothing", "always or never". (C) Consequences – emotions as a result of beliefs were in most situations of a dysfunctional type, namely: anxiety, anger, guilt, feelings of hurt and shame. The behaviour of overloading and over involvement was also dysfunctional. The Rational Emotive Behaviour Therapy would be useful. Thus, after identifying the aforementioned ABC, would follow (D): disputing irrational thoughts and beliefs (for instance, is it correct and logical the belief that things must always be the way I want?) and (E): effects, effective new emotions and behaviours that result from the replacement of the irrational beliefs with some reasonable alternatives (for example, breaking these personal rules is to some extent acceptable and allows me to feel disappointed sometimes, I do not like it, but I can stand it (Ellis, 1977, pp. 3-34; Ellis and Dryden, 2007).

The studies have shown that depressed mood and anxiety associated with the deterioration of health-related quality of life are factors negatively impacting the development of IBD (Mittermaier et al., 2004).

This was also identified in this research: CPR included in the causes of her disease her pride and emotivity. Moreover, the chronic illnesses, such as CD, induce changes in emotions, behaviour, and influence personality. Moreover, the disease is a stressor that can perpetuate itself.

The results at the questionnaire, her story of existential events, depressive, anxious, aggressive feelings, as well as shyness can indicate neuroticism (Costa and Mc Crae, 1991).

This study has identified formulations of the patient's life story that indicate perfectionism as an irrational, self-defeating belief, characterized by an absolutist must to obtain success in getting what she wants, minimal disapproval of other people whom she considers important. These aspects can lead to problems such as anxiety sensitivity, hypercompetitiveness, and stress (Ellis, 2002, p. 217-29).

In the analysed period, the patient CPR was under the impact of five main negative stressors death of a close relative, illnesses, marriage, changes of the eating habits, and difficulties in her own personal achievement (Holmes and Rahe, 1967).

Furthermore, the challenges of the workplace had a negative impact on patient. They were lived with intense negative emotions that could have triggered the disease and small remissions.

Between life stress and illness a relationship exists. Life situations cannot be changed, most often they are not under our control, so it matters how we defend against stressors and more important is what the person thinks about that life situation (Rahe and Arthur, 1987).

The patient CPR told that blood tests indicated that the cortisol was high and this aspect should not be considered accidental. IBD pathogenesis involves immune molecules Cytokines. The stress alters their profile and the production of hormones such as cortisol and serotonin, which can contribute to IBD pathophysiology (Bamias, Kaltsa and Ladas, 2011). In the case of CPR and in others presented in two previous articles (Rada et al., 2017a; Rada et al., 2017b), the following behaviour drivers were identified: *Be strong, Be perfect, Please others*. From the perspective of the transactional analysis The psychotherapeutic intervention by offering corresponding permissive messages: *show what you feel, you are good enough* and especially *it is OK to please yourself, to make yourself content* would help the patients re-evaluate these strategies of survival from childhood, these counterproductive mottos (Kahler and Capers, 1974; Kahler, 1975).

The presence of these drivers make the patient deny the need for rest, so medical leave when there are flare-ups, even if moderate, should not be a mere option, but a necessity for efficient recovery.

One of the major acquisitions of the children of 2-4 years is the control of the anal sphincter – the retention or the expulsion of feces, which gives them great satisfaction. It is the first conquest in their social life and, at the same time, the first way to please the beloved adult. For each

success, they are gratified. Diarrhea is very difficult to control even in healthy individuals who have an episode of food intolerance or infection. In the case of the patients with IBD, for whom diarrhea seems never-ending, recurs, anxiety can reach the peak. The imperative sensation of defecation, which is extremely difficult to control, makes the patients feel they are regressing to the anal stage. In this context, the doctor-patient relationship is crucial in IBD, both in terms of the needed information, but especially emotionally: empathy, acceptance, warmth and active listening. The patients need a secure attachment in which they feel that the doctor is a secure base, a reference person with the role of "safe territory". The distant relationship is perceived negatively by a patient in need of consolation and support.

The limit of this study is that it is based only on a single case. However, this highlights the need for a multidisciplinary approach of patients with inflammatory bowel disease, the role of the psychologist being very important.

Conclusions

The studies regarding the influence of psychotherapy on decreasing the frequency of the flare-ups and the improvement of the life quality are not unitary in conclusions. Some showed that there were no significant improvements, but only mild tendencies of amelioration (Keller et al., 2004). Others suggest that the affective component plays a role in IBD pathogenesis (Kovács and Kovács, 2007), aspect which could support the positive role of psychotherapy. A very recent clinical review published by American College of Gastroenterology, concluded that further researches in psychosocial interventions for IBD are necessary (Ballou and Keefer, 2017).

Pain management becomes important on IBD patients. Studies show that as the pain becomes chronic pain management is more and more difficult because of impaired brain circuits. Mind-body therapies with their cognitive and emotional components induce emotions and positive cognitions and help patients to control their chronic pain and even interrupt it (Bushnell, Čeko and Low, 2013).

The adaptation to a chronic illness is another potentially stressful event for both the patient and the family and, therefore, a reason to consider psychotherapy helpful, as the patient from this case study has stated.

The patient behaved as if mourning, trapped in one of the three parts of the mourning phases: separation, void, and integration into another system. She experienced shock, denial, overloading and confusion manifested by anger, hatred, fear, despair, insecurity, vulnerability, anxiety, pessimism, bargaining, depression, and she seems to accept to a certain extent the reality of this debilitating diseases. Psychotherapy may help the patients with CD to reassess their priorities, to recover, and to reconcile with the past.

In addition to the classical medical anamnesis, a psychological-anthropological-medical anamnesis would be useful. This should be done by a clinical psychologist, psychotherapist to explore in depth the lifestyle, environmental factors, family environment, existential major events, perceived stress, coping mechanisms, etc. from which conclusions can be drawn regarding the onset and the progression of the disease. It is necessary to extend the knowledge regarding the psychological component of CD, enabling in the future the creation of a psychotherapy plan.

The treatment scheme for the patients with IBD should be based on multidisciplinary approaches which should involve the gastroenterologist, nutritionist (dietologist), surgeon, the family doctor, and the psychologist.

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The contribution of authors

The key person responsible for the article is the author of the correspondence who conceptualized the scope of this paper, performed all analyses and wrote the manuscript. Equally the authors have provided specific knowledge, critically revised the draft manuscript. The authors have read and approved the final version of the article.

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