

Occurrence of gastrointestinal and emotional symptoms in clients of a functional nutrition clinic

Ocorrência de sintomas gastrointestinais e emocionais em clientes de um consultório de nutrição funcional
Ocurrencia de síntomas gastrointestinales y emocionales en pacientes de un consultorio de nutrición funcional

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Abstract

It has been found that stress can affect various physiological functions of the gastrointestinal tract. Therefore the aim of this study was to determine the incidence of emotional and gastrointestinal symptoms in clients of a functional nutrition clinic. It was a cross sectional study in which data were collected from medical charts of adults treated at the clinic between 2013 and 2014. The Metabolic Screening Questionnaire (QRM) was used, and it was considered the following data: gender, age, symptoms such as nausea, vomit, diarrhea, constipation, swelling/bloating, belching and/or flatulence, heartburn and stomach/intestinal pain, mood swings/bad morning mood, anxiety, fear, nervousness, anger, irritability, aggressiveness and depression. It was found that 63.9% and 62.0%, of the population, respectively, showed signs of swelling/bloating, while 46.3% had constipation. Among the emotional symptoms, anxiety stood out with 87.9%, followed by mood swings/bad morning mood with 61.1%, anger/irritability/aggressiveness with 59.2%, and depression with 53.7%. It was concluded that there was a high incidence of gastrointestinal and emotional symptoms in this population. Noting, thus, possible correlation with data presented in the literature.

Keywords: Signs and symptoms. Psychological stress. Gastrointestinal tract.

Resumo

Tem-se verificado que o estresse pode afetar diversas funções fisiológicas do trato gastrointestinal. Por este motivo o objetivo do presente estudo foi verificar a incidência de sintomas emocionais e gastrointestinais de clientes de um consultório de nutrição funcional. Foi um estudo transversal descritivo no qual foram coletados dados de prontuários de indivíduos adultos atendidos no consultório entre 2013 e 2014. Dados estes retirados do Questionário de Rastreamento Metabólico (QRM) sendo considerados os seguintes dados: gênero, idade, sintomas como náuseas, vômitos, diarreia, constipação/prisão de ventre, inchaço/distensão abdominal, arrotos e/ou gases intestinais, azia e dor estomacal/intestinal, mudanças de humor/mau humor matinal, ansiedade, medo, nervosismo, raiva, irritabilidade, agressividade e depressão. Verificou-se que da população 63,9% e 62,0%, respectivamente, apresentavam sintomas de inchaço/distensão abdominal, enquanto que 46,3% apresentavam constipação. Dentre os sintomas emocionais destacaram-se ansiedade com 87,9%, seguido de mudanças de humor/mau humor matinal com 61,1%, raiva/irritabilidade/agressividade, com 59,2% e 53,7% de depressão. Conclui-se que houve alta ocorrência de sintomas gastrointestinais e emocionais na população estudada. Notando-se, desta forma, possível correlação com dados apresentados na literatura.

Unitermos: Sinais e sintomas. Estresse psicológico. Trato gastrointestinal.

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Introduction

It has been found that many people suffer from some type of mental disorder in the world and this number is increasing gradually, especially in developing countries. Mental disorders such as anxiety, depressive or somatoform symptoms, although not satisfying all the diagnostic criteria of mental disorder, they represent four of the ten main causes of incapacity throughout the world and affects 25% of the population at some stage of life (Miranda et al., 2009).

Stress is considered today as the "disease of the century", because with the rise of industrialization, it was originated a number of changes in society. Which include: acceleration time, increased productivity, multitasking, fast movement of capital, easy communication between nations and compulsive growth of the consume needs (Brito; Pereira, 2008).

In this century, the main origin of stress comes from the feeling of competitiveness and the need for accumulation that drive the man to work harder and get the maximum in the shortest time possible, this pressure increases the stress and its emotional symptoms, such as irritability, frequent mood swings, anxiety, anger, aggressiveness, fear / panic, depression and other symptoms that characterize the emotional sensitivity caused by stress (Brito; Pereira,

2008).

Physiologically, the stress is a ubiquitous condition that affects everyone. According to a definition given by Selye (1936 apud Konturek et al., 2011), the stress is a serious threat to the homeostasis of an organism. It can be real (physical) or perceived (psychological) and it is caused by events in the world outside or inside. Note that stress causes adaptive responses which serve to defend the stability of the internal environment and to guarantee the survival of the organism.

The gastrointestinal tract, and thus, the immune system are particularly sensitive to various stressors. In recent years, the influence of psychosocial and environmental stressors on the pathogenesis of gastrointestinal diseases has received increased attention in the health area (Bhatia; Tandon, 2005; Konturek et al., 2011). Stress can affect various physiological functions of the gastrointestinal tract, including gastric secretion, intestinal motility and mucosal permeability barrier function, visceral sensitivity and blood flow (Soderholm; Perdue, 2001; Nakade et al., 2007; Konturek et al., 2008; Konturek et al., 2011).

In recent years, it important interaction between stress and intestinal microbiota has been observed. Interestingly, bacteria can respond directly to signals related to stress. There is evidence that catecholamines may alter the growth, motility and virulence of pathogenic bacteria and dinners. Thus, the stress can influence the outcome of infections by these bacteria in many hosts (Lyte et al., 2011).

Given the above, the objective of this study was to determine the incidence of emotional and gastrointestinal symptoms in clients of a functional nutrition clinic.

Methodology

This is a descriptive cross-sectional study in which data were collected from medical charts of adult clients, attended between 2013 and 2014, in a functional nutrition clinic, at Camboriu/SC.

The data collected was: age, gender and gastrointestinal and emotional symptoms were extracted from the Metabolic Screening Questionnaire - MSQ, developed and validated by The Institute for Functional Medicine (Jones, 2010).

Questions about the digestive tract addressed in the MSQ include the following symptoms: nausea, vomit, diarrhea, constipation, swelling/bloating, belching and/or flatulence, heartburn and stomach/intestinal pain. While the emotional symptoms questioned are: mood swings/ bad morning mood, anxiety, fear, nervousness, anger, irritability, aggressiveness and depression. The MSQ was applied and evaluated according to the following response options: Never or almost never had the symptom; occasionally had, effect was not severe; occasionally had, effect was severe; often had, effect was not severe; and often had, effect was severe.

For the result analysis, the answers considered were "sometimes" and "frequently", regardless whether the effect was severe or not, thus, each symptom was rated on their performance as "never", "occasionally" - monthly occurrence; and "frequently" - weekly occurrence.

The quantitative variables were calculated as means and standard deviations. And the categorical variables were described by their absolute (n) and relative frequency (%). Data were tabulated using the Microsoft Excel software.

Results and discussion

Data was collected from 108 medical charts of clients, among them 73.1% (n=79) were women, and 26.9% (n=29), men. The average age was 36.4 years old, whereas the minimum age was 19 years and the maximum 65 years.

Table 1 shows the incidence of gastrointestinal (GI) and emotional symptoms in clients of a functional nutrition clinic.

Table 1. Occurrence of gastrointestinal and emotional symptoms of clients of a functional nutrition clinic. Camboriu, 2014.

Variables	Never	Occasionally	Frequently
GI symptoms			
Nausea/vomit	83.3% (n=90)	12.0% (n=13)	4.6% (n=5)
Diarrhea	76.9% (n=83)	13.0% (n=14)	10.2% (n=11)
Constipation	53.7% (n=58)	22.2% (n=24)	24.1% (n=26)
Swelling/bloating	36.1% (n=39)	30.6% (n=33)	33.3% (n=36)
Belching/flatulence	38.0% (n=41)	38.9% (n=42)	23.1% (n=25)
Heartburn	64.8% (n=70)	23.1% (n=25)	12.0% (n=13)
Stomach/intestinal pain	64.8% (n=70)	21.3% (n=23)	13.9% (n=15)
Emotional symptoms			
Mood swings/ bad morning mood	38.9% (n=42)	38.0% (n=41)	23.1% (n=25)
Anxiety/fear/nervousness	12.0% (n=13)	47.2% (n=51)	40.7% (n=44)
Anger/irritability/aggressiveness	40.7% (n=44)	48.1% (n=52)	11.1% (n=12)
Depression	46.3% (n=50)	34.3% (n=37)	19.4% (n=21)

Legend: Descriptive analysis of absolute (n) and relative frequency (%).

As shown in Table 1 it can be noted that more than half of the individuals had symptoms of swelling/bloating and belching/flatulence, occasionally or frequently, totaling 63.9% and 62.0% of the population, respectively. Was noted that constipation occurred in a lower proportion, however, had a significant percentage reaching 46.3%, adding the both frequencies.

As for emotional symptoms, it was observed that more than half of the clients had any symptoms, in occasional or frequent occurrence, highlighting the occurrence of anxiety in 87.9% of them, followed by mood swings/bad morning mood with 61.1%, anger/irritability/aggressiveness with 59.2%, and depression with 53.7%.

The high occurrence of gastrointestinal and emotional symptoms may be related to each other since it is known that emotional stress is a cause for various problems in GI tract. This relationship was previously reported for the first time in 1838 by William Beaumont, which cited the case of a soldier with gastric fistula, in his study he showed that anger or fear can significantly influence the gastric physiology, especially the secretion of hydrochloric acid (Konturek et al., 2011).

Currently this connection is known as brain-gut axis, which incorporates the central system, peripheral, autonomic and enteric nervous system, and the endocrine and immune systems, gastrointestinal functions and environmental stimuli including the gastric and intestinal microbiota function (Budzynski; Kłopocka, 2014).

It is known that the intestine plays an important role in the metabolism of tryptophan and thus the serotonergic system (O'Mahony et al., 2014). The hormone serotonin is well known for its cerebral action of well-being, to the point to be used strategies to improve your metabolism in the treatment of depression, whose patients affected by this psychiatric disease have admittedly lower production of serotonin. In addition, this hormone has recognized role in motility and gastrointestinal secretion, and can be influenced by the composition of the intestinal microbiota (O'Mahony et al., 2014).

Silva et al. (2012) reported in their study, in which the prevalence and correlation between constipation and anxiety,

among students of a college was verified. They evaluated 40 students using specific protocols for both variables, and as outcomes they found a prevalence of 47.5% of the sample with symptoms of constipation, and 47.5% showed some level of anxiety. These data, indicated similarities to the present study results.

Given the above, it can be said that probably the high occurrence of gastrointestinal symptoms could be related to the high incidence of emotional symptoms of the population evaluated in the present study. As the swelling and bloating caused by gases may originate in gastric secretion problems and constipation may have originated in the intestinal motility problems, understanding that serotonin is deficient in stressed and depressed individuals, and several studies have associated the anxious behavior with the intestinal microbiota (Bercik, et al, 2009; Lee, Chua, 2011; Foster; Mcvey Neufeld, 2013), thus dysbiosis - unbalanced microbiota - would be an important etiology of emotional problems. As well, stress would be a significant etiology of gastrointestinal problems (Ribeiro et al., 2011).

Final considerations

High incidence of gastrointestinal and emotional symptoms in this population was found, noting thus a possible correlation between them. It can be said that the brain-gut axis form a strong bond that any change in the central nervous system or the digestive affects its harmony, therefore, not only stress causes gastrointestinal problems, but also any emotional change can cause gastrointestinal problems, leading to a "vicious-cycle".

Due to lack of studies on the subject, it is suggested that further researches should be conducted to evaluate the prevalence and correlation of gastrointestinal and emotional symptoms, with larger population or sample to obtain better conclusions regarding this relationship.

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