Anorexia nervosa: A literature review

Iliadis Ch. [1,B,D], Frantzana A. [2,A,G], Ouzounakis P. [3,C,B], Kourkouta L.* [4,E,F]

1. Private Diagnostic Health Center of Thessaloniki, Greece
2. General Hospital of Thessaloniki "Papanikolaou", Greece
3. General Hospital of Alexandroupoli, Greece
4. Nursing Department, International Hellenic University, Greece

A- Conception and study design; **B -** Collection of data; **C -** Data analysis; **D -** Writing the paper;
E- Review article; **F** - Approval of the final version of the article; **G** - Other (please specify)

ABSTRACT

Introduction: Anorexia nervosa is a food intake disorder characterized by acute weight loss that it could cause severe psychosomatic problems.
Purpose: To present the data and information as well as the treatment related to Anorexia nervosa.
Materials and methods: The study material consisted of reviewed articles on the topic found in Greek and globally accepted electronic databases, Pubmed, Scopus, Medline, Google Scholar, regarding the effects of Anorexia nervosa on health and its treatment.
Results: Initial symptoms of Anorexia nervosa and Bulimia Nervosa may be characterised by body-related negative interpretation bias, distorted body image and pronounced body dissatisfaction. Anorexic patients refuse to eat with their family or in public places. They lose weight by drastically reducing their total food intake, with a disproportionate reduction in the amount of meals containing carbohydrates and fats. The term Anorexia is unfortunate, because a decrease in appetite does not occur. Patients are constantly hungry and they are constantly thinking about food, but they refuse it. An indication of their way of thinking is that they often collect recipes or prepare complex meals for others.
Conclusions: Anorexia nervosa is a disease that connects the physical with the mental dimension of health. A person's disharmonious relationship with oneself, which may have its roots in a dysfunctional family context or in a demanding and competitive social environment, finds the way to be manifested through the individual's reflection on food.
Keywords: Anorexia nervosa, health problems and treatment.

DOI:

***Corresponding author:**
Kourkouta Lambrini, laku1964@yahoo.gr

Received: 27.06.2020
Accepted: 11.09.2020
Progress in Health Sciences
Vol. 10(2) 2020 pp 74-79
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INTRODUCTION

Anorexia nervosa is a food intake disorder characterized by acute weight loss that it could cause severe psychosomatic problems [1].

Diagnostic criteria for Anorexia nervosa include an intense fear for obesity regardless of the fact that the sufferer is weak and has adopted a distorted perception of the body image. Moreover, the anorexic person suffers from weight loss, at least 25% below the normal level and fails when it comes to regain sufficient weight. Also, there are no other physical or mental illnesses that could justify weight loss or the body-related negative interpretation bias, distorted body image and pronounced body dissatisfaction. Finally, women suffer from secondary amenorrhea for at least three months or primary amenorrhea in preadolescence [2].

Pathological features include excessive exercise, denial of hunger at the point of starvation, lack of sexual activity, history of using methods to rapidly reduce body weight [3].

Psychiatric characteristics arise from the problems a person faces in terms of being released from the family and gaining independence. They are expressed as issues in inhibiting the individual' completion or even having tendencies to isolation and emotional limitations and suffering from obsessive attachments [4]

There are two subtypes of Anorexia nervosa [5]:

1. A person suffering from <u>restrictive subtype</u> of Anorexia nervosa does not systematically indulge in overeating or laxatives and places severe restrictions on the amount and type of food he/she consumes.
2. A person suffering from <u>binge eating/purging subtype</u> places severe restriction on the amount and type of food he/she consumes. However, he/she displays purging behaviour and may also engage in binge eating - the person systematically engages in overeating or uses laxatives, diuretics and enemas.

Anorexic patients can be active between binge eating and restrictive subtypes at different times during the course of the disorder.

People suffering from Anorexia nervosa in their childhood were distinguished for their kindness, hard work and they were excellent students with a high spirit of responsibility and conscientiousness. In fact, they are people who zealously seek acceptance from other people and avoid conflicts. They take care of other people and fight for the perfectionism of their actions. They seek to distinguish themselves and differentiate themselves from the masses through a strict diet with the ultimate goal of weight loss [5].

The behaviour above is believed to be a kind of symbolic language used by anorexic people who do not know or are afraid to express their feelings. For example, trying to get a slim body can replace the belief of a person who is not mature or needs attention. A person's refusal to eat can be translated as a refusal to be guided or instructed by others [2].

People who develop Anorexia nervosa feel stressed and anxious when faced with new situations. Although they are known for their perfectionism, they do not have the power to accept changes in their lives [1,5].

Some anorexic patients are known for their sense of self-punishment, low self-esteem, and failure. Other types of anorexics are afraid to grow up, and therefore, take responsibility. They are often attached in relationships with their parents, excluding their involvement in other relationships. They stick to strict diets to avoid managing the demands arising in their lives such as the onset of adolescence [5].

The purpose of this paper is to present all the data and information as well as the treatment related to Anorexia nervosa.

MATERIALS AND METHODS

The study material consisted of reviewed articles on the topic found in Greek and globally accepted electronic databases such as Pubmed, Scopus, Medline, Google Scholar, regarding the effects of Anorexia nervosa on health and its treatment. The keywords used were Anorexia nervosa, health problems and treatment. The study material consisted of scientific books, reviews and research papers published during 2010-2020. The language was the exclusion criterion except for English and Greek.

Diagnostic criteria for anorexia nervosa

According to American Psychiatric Organization, DSM-5 criteria allow clinical scientists to diagnose a specific eating disorder. The most common symptoms are a continuation of those symptoms of Anorexia and Bulimia Nervosa [6].

Initial symptoms of Anorexia nervosa and Bulimia Nervosa may be characterised by body-related negative interpretation bias, distorted body image and pronounced body dissatisfaction in both Anorexia and Bulimia Nervosa and many patients display mixed anorexic and bulimic behaviours. Atypical categories of patients who deny their personal fear of obesity are malnourished and deny their distorted body image and diet. It is a common occurrence among Asian patients [7].

The DSM-5 criteria are [8]:

- The patient refuses to maintain a body weight at least to the lowest limit that is normal for his/her age and height. This means that the person is not stabilized at a certain number of

kilos and continues to lose more than 85% of the total weight.

- The patients suffer from deep fear that he/she will gain weight or that he/she will end up obese even if his/her body weight is below normal.
- Disorder in the way the person experiences the shape or size of the body. The excessive effect of the physical image has a negative impact on the individual's self-esteem and denial of intentional weight loss.
- Amenorrhea in women of childbearing potential. In other words, the absence of at least three successive menstrual cycles.

Causality of anorexia nervosa

Biological, social and psychological factors are involved in etiopathology of Anorexia nervosa. Specifically:

1. Biological factors

Some indications point to increased ratios in monozygotic twins compared to dizygotic twins. Sisters of anorexic patients are also more likely to suffer from Anorexia nervosa. However, this relationship may reflect a social rather than a genetic effect. After all, major emotional disorders are more common in anorexic family members than in the general population.

Reduced noradrenergic activity and reduced levels of 3-Methoxy-4-hydroxyphenylglycol (MHPG, MOPEG) have neurochemically been found in urine and cerebrospinal fluid in some anorexic patients. Malnutrition itself results in many biochemical changes, most of which are also found in depression. However, these disorders are corrected by refeeding [9].

2. Social factors

Patients with Anorexia nervosa find support in developing the practices they apply in their disease, from the appearance that modern society and cultural values give to the slim ideal body and physical exercise. There is also evidence that anorexic patients have very close but disturbed relationships with their parents and that with their eating disorder, they try to divert attention from the parents' turbulent marriage [10].

3. Psychological factors

Anorexia nervosa or Psychogenic Anorexia seems to be a reaction to the demands of adolescence for more independence and increased social and sexual activity. In a way, patients with their disorder replace normal adolescent pursuits with eating and controlling weight. Anorexic patients show deficiencies in their ego sense of autonomy and self-determination. They often feel that their body is somehow under the control of their parents. Self-imposed malnutrition could be seen as an attempt to gain value and self-esteem. It seems that by exercising the excessive self-discipline, required by anorexic behaviour, the anorexic patient manages to develop a sense of autonomy and self-determination and if he/she succeed in limiting the feeling of personal inefficiency that possesses it [11].

4. The impact of the media

A large number of nutritional pressures have been promoted by the restrictions placed by the fashion industry through advertising. The film and weight loss industry deify a weak and beautiful body through standards. Anorexia nervosa is an extension of the diet that individuals follow to achieve the ideal model, according to media standards [9].

5. Physiological factors

There are some hypotheses that some features of body physiology exacerbate Anorexia nervosa as follow [4]:

- Gastroparesis, also known as delayed gastric emptying in people suffering from Anorexia nervosa.
- Cholecystokinin levels, which play a role in regulating food intake and gastric emptying, differ in the plasma of anorexic patients compared to nutritionally normal people.
- Patients with Anorexia nervosa have a feeling of satiety whether gastric emptying is prolonged or not.
- Activation of gastric emptying signals the onset of a pathophysiological reaction in patients with Anorexia nervosa; it helps maintain the psychosocial commitment that rejects food intake.

Clinical presentation of anorexia nervosa

They lose weight by drastically reducing their total food intake, with a disproportionate reduction in the amount of meals containing carbohydrates and fats [12].

The term Anorexia is unfortunate, because a decrease in appetite does not occur. Patients are constantly hungry and they are constantly thinking about food, but they refuse it. An indication of their way of thinking is that they often collect recipes or prepare complex meals for others [1].

Some patients may not be able to control the constant listening to food intake and have recurring episodes of overeating, which usually occur secretly at night and they are followed by self-inflicted vomiting. Other ways that are often used for weight loss are the abuse of laxatives, emetics or diuretics and even excessive physical activity, such as exercise, cycling and walking [5].

Furthermore, other strange behaviours in relation to food are common. For instance, anorexic patients tend to hide food in various parts of the house, in pockets or bags; they even they throw away some of the food where they can, cut their food into small pieces during the meal, and delay too long to finish their meal [13].

If asked about these strange behaviours, they deny that they are unusual or resist discussing that issue. Excessive fear of weight gain exists in all patients and determines the lack of interest or even resistance in any therapeutic intervention [5].

Obsessive-compulsive behaviour, depress-sion and anxiety are often described in the psychiatric symptomatology of anorexic patients, which are usually rigid and futile. There is often physical discomfort, especially epigastric discomfort. Forced theft (kleptomania) usually for a sweet or laxatives or, less frequently, for other items may sometimes occur [13].

Commonly, there is poor sexual adjustment in adolescents with delayed psychosocial development, or in adults with reduced sexual interest as a result of the disorder [13].

Differential diagnosis of anorexia nervosa

The diagnosis of Anorexia nervosa is made particularly difficult by the patient's refusal to discuss the symptoms, the secrecy surrounding the rituals of eating behaviour, and the general resistance of the patient. Therefore, the mechanism of weight loss and the patient's understanding of thoughts about the disorder in the body image could be difficult to determine [14].

The clinical scientist must safely rule out the existence of a physical illness that may be responsible for weight loss (e.g. a brain tumour, cancer, malabsorption syndrome). Weight loss and unusual eating behaviours along with vomiting may occur in the context of other psychiatric disorders. Depressive disorders have certain symptoms common to Anorexia nervosa, such as depression, crying, sleep disturbance, and suicidal ideation [15].

However, in depression, if there is weight loss, there is a serious appetite disorder, while the anorexic patient claims that he/she has a normal appetite and feels hungry. The anxiety that accompanies depression is different from hyperactivity of the anorexic patient who is intentional and has a ritualistic character. Calorie intake and food composition engagement, recipes and meal preparation are not shown to be depressing features. Of course, there is no fear of obesity and there is no denial of weight loss [14].

Obsessive-Compulsive features regarding food are rarely related to the caloric content of food in schizophrenia. A schizophrenic patient will rarely be overwhelmed by the fear of obesity and will not show the characteristic hyperactivity of the patient with Anorexia nervosa [16].

Finally, Anorexia nervosa should be distinguished from Bulimia Nervosa. Here, overeating episodes are accompanied by depressive feelings, thoughts of low self-esteem and feelings of shame, while the patient's weight is usually kept relatively close to normal, very rarely reaching a loss of more than 15% of the expected [17].

Treatment of anorexia nervosa

The first step in treating Anorexia nervosa is to correct the patient's nutritional status, because dehydration, starvation and electrolyte disturbances could pose a serious risk to health and, in some cases, death [18]. Generally, hospitalization is recommend-ded in patients with Anorexia nervosa, who have less than 20% of the expected weight in relation to their height, while psychiatric treatment ranging from 2 to 6 months is required in patients with less than 30% of the expected weight, in milder cases, hospitali-zation may not be necessary [19]

The administration of drugs is determined not only by the diagnosis, but also the clinical characteristics according to the medical physician. Psychotropic drugs should be avoided until electrolyte levels are restored or when a significant increase in the patient's weight has been restored. Selective serotonin reuptake inhibitors (SSRIs), drugs with milder side effects, should be preferred [20].

Cognitive-behavioural therapy is particu-larly effective in the case of Psychogenic Anorexia. However, in cases where psychiatric disorders coexist with psychogenic Anorexia, special manipulations are required, both in terms of medication and in terms of psychotherapy. For example, the coexistence of a bipolar disorder and psychogenic anorexia is treated more effectively with the administration of anti-epileptic drugs that do not contribute to weight gain [21].

Family therapy is a part of a compre-hensive treatment plan because for most patients the disease begins in adolescence. Family therapy has also been used to examine the interactions between family members and the potential secondary benefit of the patient from the disorder [19].

Prevention of anorexia nervosa

Primary prevention of Anorexia nervosa has focused mainly on the cultural factors that promote the onset of the disorder, with the ideal of thinness prevailing in Western societies. Interventions in the field of fashion and sports aim to reduce the promotion of malnourished people as models of success, social brilliance and acceptance [22].

Secondary prevention has focused mainly on high-risk groups for the occurrence of Anorexia nervosa, including young women, pupils or students, and especially, those who are on a diet or exercise intensively. The programs having been implemented are mainly psychoeducational in order to inform young people about eating disorders, diet and its consequences, as well as to show them the steps to

turn for support if they suspect that they or someone close to them is suffering from an eating disorder [23].

Tertiary prevention in Anorexia nervosa has the peculiarity that it includes not only the psychosocial consequences of the disorder, but also the long-term medical complications [22].

The anorexic patient who would be able to cope with the disorder is at risk, for several years after Anorexia nervosa, for having half-finished studies, no work and few distant friends. Therefore, it is important to continue the patient's psychological and medical support even after restoring their diet and weight. Especially, recovery is a long process that begins after the recurrence of Anorexia nervosa in chronic cases [24].

CONCLUSIONS

Anorexia nervosa is a disease that connects the physical with the mental dimension of health. A person's disharmonious relationship with oneself, which may have its roots in a dysfunctional family context or in a demanding and competitive social environment, finds the way to be manifested through the individual's reflection on food

The power of the image is greater than in any other era, with the result that it has a negative impact on some people, as well as the patterns formed by the media.

It is very important that health professionals working with young people recognize the factors that can cause Anorexia nervosa, and be prepared to deal with them but also protect them from misconceptions and dysfunctional ideals that can harm both their physical and mental health [25, 26].

Acknowledgments

We thank the health staff for their participation in our study.

Conflicts of interest

The authors declare no potential conflicts of interest.

ORCID

Iliadis Christos – 544/2020
Frantzana Aikaterini – 544/2020
Ouzounakis Petros – 544/2020
Kourkouta Lambrini – 544/2020

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