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Depressive disorders in patients suffering from anorexia nervosa

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Summary

Aim: The purpose of the study was the estimation of depressive disorders-anorexia nervosa comorbidity (based on the criteria of ICD-10 and DSM-IV). The group of 30 children (average age – 13.5), 27 females and 3 males, suffering from the first episode of anorexia nervosa, was considered.

Methods: Anamnesis from patients and their parents, clinical observation, the psychiatric examination with the experimental use of the Poznansky Children's Depression Rating Scale and the Hamilton Depression Rating Scale.

Results: The depression disorders-anorexia nervosa comorbidity was frequently observed. 73.3% of children suffered from depressive disorders in the course of anorexia nervosa. As for intensity – in 33% depression was moderate, in 20% - severe, and in 20% - mild. In the studied group of children depression symptoms occurred in the bulimic subtype of anorexia nervosa in 88.8% of cases and in the restricting subtype in 72.2%. Statistically, in the considered group, the depression was significantly more frequently observed in the first- and second-degree relatives.

Conclusions: In the examined group, a number of biological as well as psychological factors which could predispose to depression was found. However, the children were not suffering from depression until they developed anorexia nervosa and cachexia.

Key words: depression, anorexia nervosa, children

Introduction

Researchers investigating the problem of eating disorders have for a very long time reported the occurrence of depression symptoms in their patients. Literature describing this phenomenon is quite extensive. Some authors have even suggested a common aetiological background of these disorders. Currently however, both the World Health Organization and the American Psychiatric Association agree that anorexia nervosa and depressive disorders should be perceived as separate diseases; it is also confirmed in the classifications of mental disorders, ICD-10 and DSM-IV, which have been used throughout the world.

In children depressive disorders are diagnosed according to the same diagnostic criteria which are used in the case of adults; only some differences related to the present developmental stage are highlighted. In school-age children, for example, apart from the biological predispositions, the importance of the sense of helplessness or lack of competence are emphasized, whereas in adolescents the importance of the absence of plans for the future and the feeling of fatigue are stressed. Depressive mood in children and adolescents often manifests itself as considerable irritability [1, 2, 3].

The studies of depression incidence, conducted by Bomba et al (1988), show that the disease often occurs in the untreated population of children and adolescents. Subclinical depression was diagnosed most often (in 38.2% of the population) in preadolescents, i.e. children between 10 and 14 years of age, while in adolescents (up to 17 years of age) the disorder was diagnosed in 27.4% of the population [after 2]. Both the high incidence of depression (well documented by the study discussed above, including older school-age children and adolescents who were considered healthy) and numerous researchers' findings justify, if certain symptoms occur, the diagnosis of depressive disorders also in the course of other diseases, including anorexia nervosa.

Literature provides numerous findings related to anorexia nervosa-depression co-morbidity. Apart from the works of individual authors, there are also overall analyses, the advantage of which is the presentation of the subject from a broad perspective (also from a temporal aspect); the disadvantage, on the other hand, is the researchers' use of heterogeneous diagnostic criteria. To give an example, Steinhausen (1983) analysed 45 catamnestic studies of anorexia nervosa, published in German and in English between 1953 and 1981. The frequency of the occurrence of depressive disorders was described by particular authors as follows [4]:

Table 1.

The frequency of the occurrence of depressive disorders described by particular authors

Author	Year of publication	Subjects	Depressive disorders comorbid with anorexia nervosa (percentage)
Kay	1953	33 patients, aged 16 - 20	6%
Blizet et al	1961	patients aged 7-14,	87%
Kay and Shapira	1965	60 patients, aged 20 -22	27%
Theander	1970	94 subjects, aged 11-34;	29%
Halmi et al	1973	patients under 15	27%
Halmi et al	1973	patients over 15;	23%
Morgan and Russell	1975	40 patients, aged 11-40;	45%

Sturzenberger (1977), Cantwell (1977) – recognised depression symptoms in 67% of the subjects aged 11-16 on the basis of the anamneses from the parents, and in 56% of the subjects on the basis of the examination of the patients. Herzog [5] conducted another detailed analysis of 40 catamnestic studies. The quoted authors recognised the following:

Table 2

Author	Year of publication	Subjects (percentage)	Diagnosis comorbid with anorexia nervosa
Rollins and Piazza	1981	91%	depressive disorders
Hall et al	1984	6%	depression
Hall et al	1984	35%	dysthymia
Nussbaum et al	1985	41%	chronic depressive disorders

Bryant – Waugh (1988) described a group of 48 children aged 7.7-13.2 (including 15 boys), who fulfilled the criteria of anorexia nervosa, with their average catamnesis of 7.2 years. In the course of the disease he recognised depressive disorders in 56% of the subjects in the group [6].

Steiner (1990) emphasises the fact that depression occurs more often in patients suffering from the bulimic subtype of anorexia than in those suffering from the restricting subtype, as well as the fact that the mental condition does not improve without taking medication [7].

Halmi (1991) in her 10-year catamnesis recognised depressive disorders in 67.7% of the patients suffering from anorexia nervosa [8]. Braun (1994) confirmed these findings in his study, estimating the incidence of depressive disorders in 81.8% in patients suffering from the bulimic subtype of anorexia nervosa, and 41.2% in those suffering from the restricting subtype [9]. Steinhausen, in the meta-analysis of patients up to 18 years of age, recognised comorbid depressive disorders in 20.9% of the subjects [10]. Januszkiewicz-Grabias et al, in the study including a group of 40 female patients with anorexia nervosa, receiving treatment between 1995 and 1998, recognised depressive disorders in 10 of them (25%) [11]. Komender et al (1998), in the catamnestic studies of 92 patients aged 10-20, stated that 51% of the subjects complained about periodic mood depressions and/or anxiety disorders, while in 9% depression symptoms were considerably intensified. The patients with considerably intensified depression symptoms suffered from disorexia [1].

Cooper (1995) summarised the findings of many authors studying the eating disorders-depression comorbidity [12]. He formulated the following statements:

1. Depression rarely precedes the occurrence of eating disorders.
2. In various types of eating disorders the intensity of depression is varied. Depression occurs more often in bulimia and the bulimic subtype of anorexia; it is secondary to the sense of the loss of control or helplessness.
3. Depression occurs far more often during the acute phase of the disease than during remission.

4. The pattern of depression comorbidity with eating disorders is different than that of "pure" depression.
5. Although depression occurs more often among family members of patients suffering from eating disorders, as compared to individuals without a mental health diagnosis, the reverse relation, i.e. eating disorders occurring more often in families of patients suffering from depression, has not been noticed. These findings cast doubt on the common pathogenesis of both diseases.

Most of the authors studying the problem of anorexia nervosa and the occurrence of comorbid depressive disorders agree that their influence, both on the treatment of eating disorders and on the further prognosis, is negative.

Subjects and Methods

The study included 30 children: 27 females and 3 males, aged 10 to 15.8 (average age 13.5), suffering from anorexia nervosa.

Among the subjects, 21 participants were hospitalised in the child ward of the Department of Developmental, Psychotic and Geriatric Psychiatry of the Medical University in Gdańsk; 6 participants were consulted during their stationary treatment in the Children Departments of other hospitals (Children Endocrinology Department of the Medical University in Gdańsk – 4 participants; Regional Rheumatology Unit in Sopot – 2 participants), while 3 participants were receiving medical treatment in a mental health outpatient clinic. The study was conducted between 2000 and 2002.

All subjects suffered from the first episode of eating disorders.

The diagnosis of depressive disorders as well as anorexia nervosa was made on the basis of the diagnostic criteria included in the tenth version of the International Classification of Diseases (the diagnosis took the restricting and bulimic subtypes of anorexia nervosa, distinguished by the American Psychiatric Association in DSM-IV classification, into consideration as well).

The following diagnostic methods were used: anamnesis from the patients and their parents, clinical observation, psychological examination, and the examination of mental condition with the experimental use of the Poznansky Children's Depression Rating Scale and the Hamilton Depression Rating Scale. In the analysis of results statistical methods were used.

Results and Conclusions

In the study, comorbid depressive disorders were diagnosed in 73.3% of the children; 33.3% suffered from moderate depression, 20% from severe depression, and 20% from mild depression. The evaluation of depression intensity gave similar results in both Scales.

Depressive disorders were statistically significantly more frequent ($p<0.01$) in subjects suffering from anorexia nervosa, as compared with the population of children and adolescents without this disease [2].

In comparison with the findings (presented in the theoretical part of this paper) of the authors recognising depressive disorders in 6-91% of the patients suffering from anorexia nervosa, the results of the study remain within this broad range and are rather closer to the upper limit. However, it should be noted that the described groups were usually very varied as far as the subjects' age was concerned; while the few studies focusing on children and adolescents revealed a more frequent depressive disorders-anorexia nervosa comorbidity [4, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18]. This may be related to the sense of helplessness, inefficiency, lack of influence and control, which are much more intense because of young age.

According to the researchers' findings, depression syndromes occur more often in the bulimic subtype of anorexia nervosa [7, 12, 17]. In the studied group of children, depression symptoms occurred in 88.9% of the bulimic subtype cases, and in 72.2% of the restricting subtype cases. Such a difference is statistically insignificant.

By contrast, in the studied group of children, as compared with most of the findings, depression syndromes in the restricting subtype of anorexia nervosa were diagnosed significantly more often ($p<0.01$). This result may also be related to the young age of the subjects as well as to the fact that the subjects have not managed yet to fully develop defence mechanisms, based on the tendencies, described by other authors, to falsify one's own image so as to adjust oneself and to function better [19].

Clinical anamneses revealed that there was only one subject in the case of which the anxiety-depression syndrome was observed about one year before the occurrence of eating disorders. In the case of the remaining subjects depression symptoms occurred during anorexia nervosa, usually after considerable emaciation. The relation between depression syndromes and lower body mass indices was observed; however, it was statistically insignificant. This remains in accordance with the findings of other authors, suggesting that depression can be observed more often during the acute phase of the disease as well as that depression rarely precedes anorexia nervosa symptoms [17, 20].

In the studied group, depressive disorders in first- and second-degree relatives were significantly more frequent. Among eleven children, whose family history suggested depression, eight manifested depression symptoms during the study ($p<0.01$). This remains in accordance with the findings of other authors, suggesting that genetic factors contribute to the development of depressive disorders [17].

All children from the studied group who suffered from depression had experienced head injuries or suffered from somatic diseases or psychic disturbances requiring in-patient treatment in the past; in most of the cases, some anomalies in gestational-perinatal history were revealed. These incidents are referred to as risk factors for depression: they have the form of biological susceptibility to being hurt, which under the influence of adverse psychosocial factors may lead to the development of depression symptoms [2, 3, 21, 22, 23]. In the studied group, in nine subjects out of twelve, suffering in the past or at present from anxiety disorders, depression symptoms were observed during the study (it particularly applied to children with generalised anxiety disorder and social anxiety).

Nearly all of the subjects suffering from depression were alienated from the circles of their peers, lonely, and described as submissive and passive. Social functioning as well as being recognised by one's peers are particularly important factors during the school age and adolescence. The lack of satisfying relationships with the peer group is considered to be a psychosocial factor which influences the development of depression symptoms in a highly adverse way [3, 21].

The study revealed a statistically significant correlation between being raised by single mothers (M-L Chi-square, $p<0.03$) or mothers describing themselves as passive and submissive, and the development of depression syndromes in the subjects (Fisher Exact Test, $p<0.01$). Childhood is the period of human life which is essential for the development of the phenomenon known as "learned helplessness" [3, 24, 25]. Depressed mothers, who have an anxious attitude towards the world and people, and who are not always able to cope with more difficult situations of everyday life, establish considerably tense relationships with their children, often exaggerate their health problems or upbringing difficulties, are likely to induce their own anxieties and do not provide the child with the sense of safety, indispensable for the child's development. Incorrect social adjustment of the mother undoubtedly affects the child's way of thinking and social functioning.

In the studied group a number of factors, both biological and psychological, predisposing to the development of depressive disorders, was found. It should be noticed, however, that they remained latent, and manifested themselves only after the child had started to suffer from anorexia nervosa and considerable cachexia. No other specific and statistically significant factor which would trigger depression symptoms comorbid with anorexia was found.

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