Taking into account the peculiarities of the internal picture of the disease in the implementation of the medical-psychological follow-up of adolescents with scoliosis

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It is known that scoliosis is one of the diseases of the musculoskeletal system, which often affects children of childhood and adolescence. In addition to the difficulty in resolving orthopedic issues, the psychosocial aspect remains important, in particular, the study of the peculiarities of the formation of the internal picture of scoliosis in adolescents, its prerequisites and the impact on the process of helping patients with scoliosis. The study described in the article included 169 adolescents (boys and girls) with I-II and III-IV grades of scoliosis. The program which is presented is integrated of medical and social support developed for teenagers with scoliosis and taking into account the internal picture of the disease. Approbation of measures of medical and psychological support, proved its effectiveness (р≤0,05). Measures of universal, selective and indicative psychoprevention for prevention of scoliosis and other disorders of posture in adolescent contingents have also been developed and implemented.

Key words: scoliosis; adolescents; internal picture of the disease; medical-psychological support.

Introduction

Any disease in one way or another changes livelihoods, affecting the physical and mental state of a person (Maruta, 2013; Pinchuk, Bogachev, Hobzai, Petrichenko, 2013). One of the most important factors influencing the mental development of adolescents with somatic diseases is the internal picture of the disease (IPD), which promotes socio-psychological adaptation or causes maladaptation (Dadaeva, Sklyarenko, Travnikova, 2003). Among the factors that influence the formation of internal picture of the disease and its peculiarities, researchers of the problem identify: the age features of ill adolescents; the influence of parents and their relation to the disease of the child; the specifics of bodily experience of adolescents with the disease, but the determining factor is the individual-personality traits of adolescents (Shevtsov, Bazhmin, 2013; Voronenko, Goyda, Moiseenko, 2015). Psychological work on the formation of an adequate internal picture of the disease is a necessary element in the psychological rehabilitation of adolescents (Voronenko, Goyda, Moiseenko, 2015; Druzhilov, 2011; Isaeva, 2009). Scoliosis is a curvature of the spine in the frontal plane. When the deformation progresses in the spine, the vertebrae curves around the vertical axis (torsia), called scoliosis. Scoliosis significantly affects the child’s life and health. In addition to a progressive negative impact on the musculoskeletal, cardiovascular, respiratory and other systems, the disease has a serious negative impact on the child’s psychological state (Dadaeva, Sklyarenko, Travnikova, 2003; Shevtsov, Bazhmin, 2013; Krainyukov, Mamaychuk, 2012; Petrenko, Dolyatsky, 2014). The development of marked changes in posture and deformations of the bone and joint system may cause the appearance of depressive symptoms, the child stops communicating with peers, closes in himself (Shevtsov, Bazhmin, 2013). Scoliosis in most cases accounted for adolescence. An essential feature of adolescence is its significance for the further formation of the individual. In this regard, any influence that affects the adolescence may have irreversible effects on all further human life (Petrenko, Dolyatsky, 2014). This is precisely what determines the need to study the specificity of personality characteristics and characteristics of cognitive processes in adolescents with pathologies of the spine. Understanding the mechanisms of influencing the personality of this kind of pathologies can help to limit their influence on the further life and develop...
measures of psychological support as an essential element of the system of therapeutic measures (Voronenko, Goyda, Moiseenko, 2015; Druzhilov, 2011).

Materials and contingencies of research

Within the framework of the study, there were diagnosed 169 adolescents with scoliosis of varying defect aged 14-16 years old (85 girls and 84 boys). Of the studied girls, 1 degree of scoliosis had 25 people; II degree - 22 persons; III degree - 20 persons; IV - 18 persons. Among the studied boys I degree of scoliosis had 26 people; II degree - 23 persons; III degree - 19 persons; IV - 16 persons.

To preserve the homogeneity of the study groups, its logic, based on clinical symptoms and somatological and psychological peculiarities, avoiding a large number of groups, we formed two main groups according to the severity of orthopedic abnormalities in scoliosis: 96 persons with grade I and II scoliosis were included in G1 (among these, 47 girls (G1 (g)) and 49 boys (G1 (b)), to G2 - 73 persons with III and IV degree (among which 38 girls (G2 (g)) and 35 boys (G2 (b))

Results of the study, their discussion

The study of socio-demographic characteristics was carried out by us on a number of indicators: age, gender, place of study, level of school progress, the level of income in the family, the status of a disabled person. The majority of the studied adolescents were students of secondary schools (77.51% of the total number of investigated ones). More than half of the 53.85% surveyed had an average school performance (7-9 points). The level of school performance in the groups G1 (g) and G1 (b) was higher in comparison with G2 (g) and G2 (b). The study revealed a gender difference in the level of school performance in adolescent groups: in general, girls, regardless of the severity of orthopedic pathology, were better educated than boys; while girls from G1 (g) had a higher level of performance than G2 (g). The vast majority of families belonging to adolescents of the investigated groups had an average or low level of income (G1 (g) - 89.36%; G1 (b) - 87.76%; G2 (g) - 89.47; G2 (b) - 88.57%), only about 10% of families in each group estimated their own income level as high. Disabled status of the total number of adolescents who participated in the study were 42.91%: the vast majority of them belonged to the people of III-IV degree scoliosis: 84.51% (including girls - 51.67% of boys - 48.33%). The conducted medical-psychological study consisted of 6 stages. In the course of the research used a range of methods, including: theoretical (theoretical and methodological analysis of the problem, ordering information literature, their comparison and generalization), socio-demographic, clinical and psychological method (observation, structured interviews) psychodiagnostical (psychological testing), statistical.

Among the psycho-emotional characteristics of the subjects studied the level of anxiety, the presence of depressive tendencies, the level of aggressiveness and neuroticism. Among the psycho-emotional features of the studied adolescents with scoliosis, a high level of general anxiety, a high level of aggressiveness, and the presence of depressive tendencies prevailed. At the same time there was a frequent mood change, increased excitability, tearfulness, aggressiveness, negativism or, conversely, apathy, indifference. Among the personality characteristics of adolescents with scoliosis prevailing maladaptive personality traits, reduced self-esteem, disharmonious types of attitude to the disease. The majority of adolescents with scoliosis had the types of relation to the disease predominantly intrapsychic orientation (anxiety, neurasthenic, melancholia and apathy types) (G1 (g) - 68.08%); G1 (b) - 61.23%, G2 (g) - 68.42%, G2 (b) - 62.86%) without statistical difference between groups (p> 0.05). The emotional-affective sphere of relations in such adolescents was manifested in nonadaptive behavior and reactions by type of irritable weakness, as well as in anxiety, depression. Characteristic for them was the "departure from illness", the rejection of the struggle for health.

Types of responses with interpersonal orientation (sensitive, egocentric, paranoid and dysphoric) occurred in about one third of the examined adolescents (G1 (g) - 31.92%); F1 (b) - 32.65%, F2 (g) - 31.58%, F2 (b) - 37.14%; p> 0.05). Patients with these types of attitude to the disease with various emotional-affective reactions to the disease were additionally characterized by maladaptive behavior, which could lead to a violation of their social functioning.

The most commonly used protective coping strategies in the groups of the studied adolescents were: Compensation (G1 (g) - 69.4 points, G1 (b) - 72.4 points, G2 (g) - 75.3 points, G2 (b) - 78.5 points), substitution (G1 (g) - 62.2b, G1 (b) - 64.8 points, G2 (g) - 67.1 points, G2 (b) - 70.8 points) and regression (G1 (g) - 61.0 points, G1 (b) - 63.7 points, G2 (g) - 72.2 points, G2 (b) - 68.4 points). The greatest degree of tension (ie, expressive maladjustment) differed such coping strategies as "distancing", "seeking social support", "confrontation", "escape-avoidance", "taking responsibility".

A large number of adolescents of all groups noted the existence of conflict relations with their peers (G1 (g) - 74.47%; G1 (b) - 81.63%; G2 (g) - 81.58%; G2 (b) - 82.86 %) Some people noticed that they repeatedly became objects of school bullying: they experienced physical and verbal aggression on the part of classmates. In all the surveyed boys and girls, the relationship between parents was characterized by a high level of conflict, with no significant difference between the groups (p> 0.05). In 76.8% of adolescents with scoliosis who participated in the study, there were manifestations of the rejection of emancipation, which was characterized by intolerance of criticism from adults, in the desire to do the opposite, in spite of being away from home, getting to work for financial independence.

Based on the existing scientific theory of internal picture of the disease, as well as having systematically analyzed the data of our own psychodiagnostic study, we described the structure of IPD and developed a model for the formation of IPD in adolescents with scoliosis. We divided the concept of HICs into six components: sensory, emotional, personal, intellectual, motivational, and social. Based on the components of our IPD, we have identified the factors that influence its formation, and divided them into groups: physiological, psychological and social. They were also divided into factors of the positive and negative pole. Based on the data we have received, it can be argued that the
Factors of the negative pole can affect the survival of adolescents with scoliosis, forming its maladaptive variant. Accordingly, the action of the factors of the positive pole allows us to form an adaptive IPD. In the developed model, we also took into account interventions that could be applied at different stages of the formation of the IPD. Thus, psychoprophylaxis can be used at the stage that precedes the stage of final formation of IPD, and on which we can already determine the effect of factors of its formation from the negative pole.

At the stage when the maladaptive IPD is already formed, it is expedient to use complex measures of psycho-corrective intervention, the use of which allows the elaboration of an adaptive variant of IPD in adolescents with scoliosis. In the future, in the next stage, we support the established adaptive IPD as a result of the use of ablation technologies in the form of interdisciplinary comprehensive support.

Based on the developed IPD scheme for adolescents with scoliosis, we developed a comprehensive program of psycho-corrective interventions that took into account and influenced all components of the IPD: sensory, emotional, personal, intellectual, motivational, and social. The sensory component was influenced by the use of specific medical measures, measures of physical rehabilitation and exercise therapy, yoga. Technologies of RET therapy of A. Alice were used for action on the emotional component of IPD. On the personal component of the influence through individual psychological counseling of adolescents. The use of psycho-educational measures helped to influence the intellectual component of the IPD. Motivation training (motivational component) was used to improve motivation for treatment and rehabilitation. The social component of the IPD was introduced, using a family-friendly training and anti-violence training.

Approval of measures and medical and psychological support, proved its effectiveness relative to the comparison groups (p≤0.05).

There were developed and implemented measures of universal, selective and indicative psychoprophylaxis for the prevention of scoliosis and other disorders of placement in adolescent contingents. The author’s comprehensive medical and psychological support has proved its effectiveness, allowing to significantly reduce maladaptive manifestations on the psycho-emotional, personal, socio-psychological levels, as well as improve the quality of life of adolescents with scoliosis.

A program for assistance for adolescents with scoliosis was developed, which had 5 components: organization of a rational mode of the day, medical support, socialization in peer groups, professional orientation, support for social engagement.

Conclusion

1. Based on the identified components of the IPD, groups of positive and negative factors influencing its formation were identified: physiological, psychological and social. Factors of the negative pole can affect the survival of adolescents with scoliosis, forming its maladaptive variant, respectively, the action of the factors of the positive pole allows us to form an adaptive IPD.

2. IPD of adolescents with scoliosis is a complex phenomenon, which contains 6 components: sensory, emotional, personal, intellectual, motivational and social. The revealed violations within the defined components of the IPD became targets of psycho-corrective influence. In adolescents with scoliosis at the sensory level, the severity and sense of tiredness in the muscles and joints, tingling (87.54% - G1 / G2 (g / b)), painful manifestations (14.23% of adolescents from G1 (g / b) and 76.37% of people of G2 (g / b)); on an emotional level - a high level of anxiety (82.21% - G1 / G2 (g / b)), depressive trends (79.45% in G1 (g / b), 91.23% in G2 (g / b)), aggressiveness (35.6% - G1 / G2 (g / b)); on the personal level - maladaptive personality characteristics (100.00% - G1 / G2 (g / b)), low self-esteem (56.37% in G1 (g / b), 83.68% in G2 (g / b)), disharmonic types of relation to the disease (100.00% - G1 / G2 (g / b)); at the intellectual level - the lack of information on their own disease of the prognosis and the ways of treatment (89.20% - G1 / G2 (g / b)); on the motivational level - the motivation for treatment and improvement in the majority of subjects (83.79% - G1 / G2 (g / b)), lack of health-saving motivation in 16.21% - G1 / G2 (g / b) adolescents; on the social level - conflict in the family (76.52% in G1 (g / b), 82.27% in G2 (g / b)) and their peers (64.89% in G1 (g / b), 85.14 % in G2 (g / b)), disturbance of relationship with father and mother (71.65% in G1 (g / b), 80.96% in G2 (g / b)), use of maladaptive behavioral strategies in conditions stress (100.00% - G1 / G2 (g / b)), the tendency to decrease the level of social adaptation (63.46% in G1 (g / b), 82.23% in G2 (g / b)).

3. Scientifically substantiated, developed and put into practice measures of medical and psychological support of adolescents with scoliosis. Approval of measures of medical and psychological support, proved its effectiveness relative to the comparison groups (p≤0.05). Measures of universal, selective and indicative psychoprophylaxis for the prevention of scoliosis and other disorders of placement in adolescent contingents have been developed and implemented.

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