

PSYCHIATRICS & MEDICAL PSYCHOLOGY

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MODERN APPROACHES TO MEDICAL AND PSYCHOLOGICAL SUPPORT OF FAMILIES WITH INFANTS WITH SEVERE CRANIOCEREBRAL TRAUMA

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Abstract: The study involved a comprehensive survey of 137 families (mother and father) of children with severe somatic disease aimed at the development and evaluation of the system of medical and psychological support of families with a somatically challenged child. The main group comprised 97 families participating in the program of medical and psychological support, and the control group included 40 families who did not receive psychological support. According to our findings, a serious disease of the child became a psychotraumatic situation for all the parents, resulting in the development of anxiety-depressive reactions and conditions. Psychodiagnostic examination showed that the parents had mild, moderate depressive and anxious episodes on the Hamilton Rating Scale; high levels of situational and personal anxiety according to the C.D. Spielberger Inventory, a high level of neuropsychic stress on T.A. Nemchin Scale. The couples under investigation noted tensions in family relationships, family conflicts, related to the treatment of the child and escalation of pre-existing interpersonal and marital problems that led to distancing and a decrease in internal family resource. Based on these data, we have developed a system of medical and psychological support of the families with somatically challenged child, which consisted of four consecutive phases and included the use of individual cognitive-behavioral therapy (Beck AT, 2006), family therapy (Eidemiller E. G., 2003), rational therapy (classic Dubois P., 1912) and psychological educational programs. Case monitoring in the main group following the employment of the proposed system of medical and psychological support showed a stable positive pattern of psychological state with a statistically significant total reduction of anxiety-depressive states and the harmonization of the marital relationship.

KeyWords: Medical and psychological support, anxiety, depression, family interactions, infants with severe craniocerebral trauma.



INTRODUCTION

Protection of mental and physical health of the mother and child is one of the priorities of the state social policy in our country. Epidemiological studies of craniocerebral trauma incidence in children are conducted in many countries and indicate general trends with slight fluctuations in rates. In the CIS countries this figure is about 2%. Traumatic brain damage in newborns is 2%, 25 - 25.9% in infants, 7.1 - 8% in toddlers, 20% in preschool age children and 45% in school age children. Of all the children affected by craniocerebral trauma infants comprise 27.9% [1, 2, 3]. Serious diseases in children have a psycho-traumatic effect on parents, manifested by disorders of adaptation and anxiety-depressive states.

Craniocerebral trauma is one of the most important and actual problems of pediatric traumatology, which has great social and medical significance due to its prevalence and severity of consequences [4, 5]. Parents of an infant with severe craniocerebral trauma are under high psychological pressure, resulting in psycho-emotional impairments and other manifestations of psychosocial maladaptation. During this period, it is particularly relevant to search for sources of medical and psychological support, to increase the psychological adaptation resource of parents [6, 7].

Psycho-emotional state of the parents is closely associated with changes in physical and mental condition of a sick child. At the same time, psychological well-being of the child depends on the mental state of his parents, in particular, those who are emotionally closer. Thus, a serious illness of a child is a powerful stressful situation for the whole family, which dramatically changes family functioning [8, 9, 10].

Destabilization occurs even in resourceful and well-adapted family-based systems; however, family has a pow-

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erful potential support and gradually tries to adapt and develop new strategies of internal family interactions in case of long-existing crisis. We should also emphasize that the harmonious development of the child is inextricably linked to the welfare of the family, sense of security, support and protection [11, 12, 13].

2 PURPOSES, SUBJECTS and METHODS:

2.1 Purpose of the research was to develop and evaluate a system of medical and psychological support of families with infants with severe brain injury.

2.2 Subjects & Methods

To achieve the goal, we carried out a comprehensive survey of 137 families (mother and father) of infants with severe craniocerebral trauma treated at the Children's Neurosurgical Department of A.I. Meshchaninov Kharkiv City Clinical Emergency Care Hospital.

The main group consisted of 97 families who took part in medical and psychological support program. The control group consisted of 40 families who did not receive psychological support.

The study involved the employment of the following research methods: history taking; psychodiagnosis using the questionnaire of mental stress (T. A. Nemchin, 1984), Hamilton Depression Rating Scale (M. Hamilton, 1967), adapted to ICD-10 (G. P. Panteleyev, 1988), C. D. Spielberger State-Trait Anxiety Inventory (adapted by Yu. L. Khanin, 1981), methods of lifestyle index diagnosis (adapted by L. S. Wasserman, O. F. Yerishev, Y. B. Klubova (1998)), methods of stress-overcoming behavior assessment "Ways of coping" (adapted by T. A. Krukova, 2002), Thomas-Kilmann Model of Conflict Management Styles, adapted by N. V. Grishina (D. J. Raigorodsky, 2002).

Methods of mathematical statistics, with results presented in the form of an average value \pm the representativeness error at the probability level of $p < 0.05$.

Conflict of interests

There is no conflict of interests.

3 RESULTS AND DISCUSSION

The findings showed that craniocerebral trauma in infant was a traumatic situation for all the parents, which provoked a whole range of difficult issues, namely the need for decisions related to the treatment of the child; concern about the impact of injury and surgical treatment on physical and mental development of the child; experiences associated with planned operational intervention; disruption of family functioning; aggravation of family, marital, interpersonal and intrapersonal conflicts; the need for adaptation to stay in a medical institution (medical procedures, everyday aspect); exclusion from the professional activities of the caring family member.

The most significant issues for parents at the stage of admission to neurosurgical hospital and examination of the child were the questions of actual surgical intervention, effectiveness of treatment and its impact on physical and mental development of the child; concern over the result of the operation, its consequences; fear of anesthesia, its side effects.

In the postoperative period, the most severe concern is the care, rehabilitation and exclusion from social functioning in need of the child's care, redistribution of responsibilities at the time of treatment. Parents had to adapt to conditions of functioning in the hospital and adapt the child to them.

The range of stress experiences varied in women and men. While staying at a hospital, the mother was near the sick child and her duties included care for the child, while men were forced to engage in financial and social aspects.

According to the findings obtained in the study, parents (mother and father) had low mood (97.6% of patients), depression (66.2%), a sense of sadness and sorrow (73.5% of respondents), anxiety, constant internal stress with inability to relax (67.4%), state of confusion (36.3%), fears and concerns associated with weather conditions (87.3%), a sense of danger and failure (69.8%).

According to the Hamilton Depression Rating Scale, 53.6% of the surveyed had mild (16.4 ± 1.3 points) and 32.3% had moderate (24.6 ± 1.7 points) depressive episodes. According to the Hamilton Anxiety Rating Scale, 55.4% of the parents

had mild (16.6 ± 1.3 points) and 40.2% had moderate (24.9 ± 1.8 points) anxiety episodes.

Psychodiagnostic assessment showed high levels of situational and personal anxiety in the surveyed parents by C. D. Spielberger method (58.89 and 59.19 points, respectively) with higher rates among mothers, high level of severity of mental stress on the scale of T.A. Nemchin (69.41 points).

Analysis of applied coping strategies concerning behavioral method helping to cope with the situation, showed that most families used strategies aimed at emotion (57.1 ± 5.6 points), avoidance (51.7 ± 5.7 points), social distraction and adjustment (50.9 ± 7.2 points, respectively), $p < 0.05$.

The families under investigation noted tension in family relationships, family conflicts, both related to the treatment of the child, and escalation of previously existing interpersonal and marital problems, which led to distancing and reducing the intra-family resource.

Thus, consequences of an infant's severe craniocerebral trauma for parents included development of intense psychological reactions to the stressful situation (82.3%); transformation of psychological reactions into expressed anxiety-depressive disorder (79.4%); maladaptive behavior during the stages of treatment (61.1%); psychosocial maladjustment (40.1%); disturbance of interpersonal relationships (87.2%); deformation of family interaction (72.3%).

According to our findings, we have elaborated a system of medical and psychological support for families of infants with severe craniocerebral trauma, which was regulated by the targets of medical psychological effects and consisted of four consecutive phases: 1st phase - compliance development, aimed at the establishment of a productive contact between the physician and the parents of the infant with severe craniocerebral trauma; 2nd phase - correction of intense mental reactions to stressful situations and change in anxious and depressive attitudes, formation of adequate ideas on postoperative period prognosis, effectiveness of treatment and impact on physical and mental development of the child; 3rd phase - the stage of correction of emotional responses to the child's condition, surgery, the need to stay in hospital, aimed at reduction of anxiety and depressive symptoms, correction of family relations; the 4th phase -

establishment and maintenance of the results by potentiation of positive emotions, fixation on the improved health of the child, specifics of rehabilitation.

The psychotherapeutic complex of the proposed system of medical and psychological support included the use of individual cognitive-behavioral therapy (A. T. Beck, 2006), family therapy (E. G. Eidmiller, 2003), rational psychotherapy (classic version by P. Dubois, 1912).

Psychological education was chosen to be the sense-making element of the developed model. Psycho-educational classes were held in closed groups of 8 to 10 parents, lasting for 45 minutes (twice a week during the entire stay of the parents with the child in the neurosurgical department). The main issues proposed during psychological education included the concept of craniocerebral trauma, the necessity and methods of neurosurgical treatment, the needs of the child during treatment, possible consequences (physical and mental) of craniocerebral trauma, psychological state of the family members of the child; self-regulation of mental state.

Case monitoring in the main group following the employment of the proposed system of medical and psychological support showed a stable positive pattern of psychological state with a statistically significant total reduction of emotional disorders in parents, $p < 0.05$: reduction in anxiety level in 73.5% of the mothers and in 83.6% of the fathers; leveling of depressive symptoms in 71.1% of the mothers and 88.6% of the fathers; a decrease in family conflicts in 72.5% of families; harmonization of marital relationship in 65.28% of the couples.

In the control group aggravation of psychopathological symptoms was diagnosed in 35.4% of the mothers and 11.2% of the fathers, 64.6% of the mothers and 88.82% of the fathers had stable presentation of anxiety-depressive disorders, and deterioration of family interactions was observed in 42.3% of the families.

4 CONCLUSIONS

The obtained results allowed us to substantiate the expedience of medical and psychological support of the families of infants with severe craniocerebral trauma.

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