ARAŞTIRMA YAZISI / ORIGINAL ARTICLE **Çocuk Sağlığı ve Hastalıkları** / Pediatrics

Depression Status in Children's Parents During Hospitalization in the Pediatric Intensive Care Unit

Seher Erdoğan[1], Arzu Oto[1], Mehmet Boşnak[1]

[1]Gaziantep University, Pediatric Intensive Care, Gaziantep, Turkey

Seher Erdoğan, Dr.
Arzu Oto, Dr.
Mehmet Boşnak, Prof. Dr.

Correspondence:
Dr. Seher Erdoğan
Gaziantep University, Pediatric Intensive Care, Gaziantep, Turkey
Phone: +90 342 360 60 60
E-mail: seher70@gmail.com

Received : Nov 25 2015
Revised : March 01 2016
Accepted : March 02 2016

ABSTRACT

Aim: The purpose of this research was to determine depression levels in parents of children hospitalized in the intensive care unit and to identify any variation between maternal and paternal depression levels.

Method: The study was performed with 25 mothers and fathers of patients hospitalized between February and April 2015 in the Gaziantep University Faculty of Medicine Hospital, Pediatric Intensive Care Unit. The Beck Depression Inventory was used to evaluate the parents' depression levels.

Results: The mothers and fathers of 25 patients were included in the study. The mean age of the patients was 61.2 ± 53.8 months (range, 3-172 months). Nineteen (76%) of patients had poor socioeconomic status, 4 (16%) had average socioeconomic status, and 2 (8%) had good status. The mean Beck Depression Inventory score was 17.9 ± 11.1 among mothers and 17.1±9.95 among fathers. No correlation was determined between socioeconomic status and maternal or paternal depression level (p= 0.64 and p= 0.77, respectively). Similarly, there was no correlation between education level and maternal or paternal levels of depression (p= 0.37 and p= 0.77).

Conclusion: Depression levels in both mothers and fathers of children hospitalized in the pediatric intensive care unit are significantly higher than those of the normal population. This study might now be repeated with wider patient groups. This study reveals the need for mothers and fathers of patients to be given psychological counseling and psychiatric support.

Key words: Depression, Pediatric Intensive Care Unit, Family

ÇOCUK YOĞUN BAKIM ÜNİTESİ'NE YATAN ÇOCUKLARIN EBEVEYNLERİNDE DEPRESYON DURUMU

ÖZET

Amaç: Bu araştırma; çocuk yoğun bakım ünitesine çocuğu yatırılan ebeveynlerin depresyon düzeyini, anne ve babaların depresyon düzeyleri arasında farklılık olup olmadığını belirlemek amacıyla yapılmıştır.

Yöntem: Bu çalışma; Gaziantep Üniversitesi Tıp Fakültesi Hastanesi Çocuk Yoğun Bakım Ünitesi'ne Şubat –Nisan 2015 tarihleri arasında yatan 25 hastanın anne ve babaları ile yapıldı. Değerlendirme için Beck depresyon ölçeği kullanıldı.

Bulgular: Hastaların yaş ortalaması 61.2±53.8 ay (min.3 max.172) idi.,. Hastaların 19'unun (%76) sosyoekonomik düzeyi kötü, 4'ünün (%16) sosyoekonomik düzeyi orta, 2'sinin (%8) sosyoekonomik düzeyi iyiydi. Hastaların anne ve babalarına yapılan Beck depresyon ölçeği skorlamasında annelerin depresyon skoru ortalaması 17.9 ± 11.1, babaların depresyon skoru ortalaması 17.1±9.95 saptandı. Sosyoekonomik düzey ile anne ve baba depresyon düzeyi arasında korelasyon saptanmadı (p:0.64 ve p:0.77). Benzer şekilde eğitim düzeyi ile anne ve baba depresyon düzeyi arasında da korelasyon yoktu (p:0.37 ve p:0.77).

Sonuç: Çocuk Yoğun Bakım Ünitesi'nde yatan çocukların hem anne hem de babalarında depresyon oranları normal populasyona göre belirgin derecede yüksektir. Daha geniş hasta gruplarıyla bu çalışmalar tekrarlanabilir. Bu çalışma, hastaların anne ve babalarına psikolojik danışmanlık ve psikiyatrik destek verilmesi gerekliliğini ortaya koymaktadır.

Anahtar sözcükler: depresyon, çocuk yoğun bakım ünitesi, aile.

The parents of children hospitalized in the intensive care unit for chronic diseases or sudden critical conditions are under an additional emotional burden in related to coping with, managing, and resolving the prevailing situation (1). Parents' mental and emotional health is the most important factor in coping with this additional burden. Parents with depression must therefore be identified and given the requisite professional support if they are to contend with such difficult emotional situations.

Parents experience stress in the event of chronic disease in their children and find it difficult to fulfill their responsibilities. Tensions rise in human relations, particularly in marital and emotional relationships. Reactions inappropriate to this traumatic situation and feelings of guilt in the family may lead to depression in the mother and father. Moreover, energy, time, and money necessary for child care place parents under stress. In addition to experiencing difficulty in responding to questions, and hearing and understanding medical explanations, particularly in the first days of hospitalization, parents may also fail to maintain their own health.

Parents require information on a range of matters, emotional support, and need to be with their children to participate in the care giving process. They need to be informed about their children's health status, the materials and equipment being used, the health team, and their own roles. Parents also need to be given sufficient professional support to allow them to adapt to the hospital environment and to reduce anxiety levels.

The purpose of this research was to determine depression levels in parents of children hospitalized in the intensive care unit and to identify any variation between maternal and paternal depression levels.

Materials and method

The study was performed with the mothers and fathers of children hospitalized between February and April 2015 in a Pediatric Intensive Care Unit. The local ethics committee approved the study (No. 10, 26.1.2015).

The Beck Depression Inventory was used to evaluate the parents' depression. Inclusion criteria were having a child hospitalized in the intensive care unit, willingness to participate, and having no previously diagnosed psychiatric disease. Subjects who did not meet these criteria were excluded.

The mothers and fathers were admitted to the interview room within the first 24 hours after their children were hospitalized in the intensive care department. They were briefed concerning the test, asked to complete the inventory without being influenced by one another, and by reading all the sentences and marking the responses they felt most closely matched their own emotional states. No time restriction was imposed for completion. Written informed consent was obtained from patient's fathers and mothers. Inventory scores <10 were considered normal, 10-16 as mild depressive symptoms, 17-29 as moderate depressive symptoms, and 30-63 as severe depressive symptoms. Patients were classified on the basis of socioeconomic status: monthly income less than 1000 Turkish Lira (TL) was regarded as poor socioeconomic status, 1000-2500 TL was moderate socioeconomic level, and above 2500 TL was considered good socioeconomic status. The parents' educational levels and whether they had previously lost any children were also recorded.

Statistical Analysis: The Kolmogorov-Smirnov test was used to check for normal distribution of constant variables. Non-normally distributed variables were analyzed using the Mann-Whitney U test. Chi-square analysis and the Cohen's Kappa test were used to assess relations between categorical variables. Pearson's correlation was used to evaluate the relationship between the independent variables. Descriptive data were expressed as mean ± standard deviation, number and percentage values. Statistical analysis was performed on SPSS for Windows version 11.5 (SPSS inc., Chicago, Illinois). $P<0.05$ was regarded as statistically significant.

Results

The mothers and fathers of 25 patients hospitalized in the Pediatric Intensive Care Unit between February and April 2015 were included in the study. The mean age of the patients was 61.2 months (range, 3-172 months). The mean ages of the mothers and fathers were 33.72 years (range, 23-51 years) and 37.68 years (range, 24-52 years), respectively.

Thirteen (52%) of the 25 hospitalized patients were girls and 12 (48%) were boys. Eight (32%) of patients had acute onset disease and 17 (68%) had chronic disease. Nineteen (76%) children had poor socioeconomic status, 4 (16%) had average socioeconomic status, and 2 (8%) had good status.

The mean Beck Depression Inventory score was 17.9 ± 11.1 among the mothers and 17.1±9.95 among the fathers.

Table 1. Levels of depression at mothers and fathers

Depression level	*Mothers*		*Fathers*	
	No.	%	*No.*	%
Normal	8	32	6	24
Mild	2	8	7	28
Moderate	10	40	9	36
Severe	5	20	3	12
Total	25	100	25	100

On the basis of the Beck Depression Inventory scores, 8 (32%) mothers were evaluated as normal, 2 (8%) had mild depression, 10 (40%) had moderate depression, and 5 (20%) had severe depression. For the fathers, 6 (24%) of the 25 were evaluated as normal, 7 (28%) had mild depression, 9 (36%) had moderate depression, and 3 (12%) were classified as having severe depression (Table 1). The comparison of levels of depression in mothers and fathers revealed non-significant compatibility (Kappa = 0.127, p= 0.261).

The correlation of acute or chronic nature of disease with maternal and paternal depression score revealed p values of 0.642 and 0.854, respectively; the differences were not significant.

No correlation was determined between socioeconomic status and maternal or paternal depression level (p= 0.64 and p= 0.77, respectively). Similarly, there was no correlation between education level and maternal or paternal levels of depression (p= 0.37 and p= 0.77). There was also no correlation between previous loss of a child and maternal or paternal levels of depression (p>0.05).

Discussion

Parents who feel an obligation to personally meet all their children's needs are severely affected when their children are hospitalized in an intensive care unit and can find the situation difficult to accept. The fear of losing children may lead to grief, anxiety, and anger within the family. Chronic disease in a child alters the family's physical, emotional, and economic equilibrium, impacts on the family's life satisfaction, and can reduce quality of life.

This study investigated states of depression in the mothers and fathers of children hospitalized in the pediatric intensive care unit.

Beck depression scores were calculated for mothers and fathers of 25 patients hospitalized in the Pediatric Intensive Care Unit between February and April 2015. Socioeconomic level was poor in 19 (76%) patients, average in 4 (16%), and good in 2 (8%). No statistically significant correlation was determined between socioeconomic level and maternal or paternal depression levels. This may be because 76% of patients had poor socioeconomic status. Several studies have shown that incidence and prevalence of depression was associated with socioeconomic level and reported higher levels in low socioeconomic status (3,4).

On the basis of the Beck Depression Inventory scores, 8 (32%) mothers were evaluated as normal, 2 (8%) had mild depression, 10 (40%) had moderate depression, and 5 (20%) had severe depression. Of the fathers, 6 (24%) were evaluated as normal, 7 (28%) had mild depression, 9 (36%) had moderate depression, 3 (12%) were with severe depression. The 1991 Epidemiological Field Research in the United States of America reported a lifetime incidence and prevalence of severe depression of 4.9% (5) Our levels of severe depression in mothers and fathers were significantly higher by comparison (20% and 12%). This may be because patients in the intensive care unit are at greater risk, which accordingly affects parental anxiety over losing their children. Less reported that the risk of development of psychological and social problems in children with chronic disease was 1.3-3 times higher than that in healthy children (6). Previous studies have considered levels of depression and anxiety in mothers and fathers of children with chronic disease. Levels of depression in mothers and fathers of children with autism and children with normal development were compared, and mothers of children with autism were shown to have significantly higher depression scores (7). Bilal et al. revealed that the families of children with developmental or health problems experienced significant stress in emotional, personal, and interpersonal spheres (8). In a study from Iran, Sharghi et al (9). reported significantly higher depression levels in mothers of children with thalassemia compared with mothers of healthy children. No significant difference was observed in our study between acute or chronic nature of disease and maternal or parental levels of depression. We think this might derive from the fact that 68% of the patients in the study had chronic disease and parents may have been harboring long-term negative emotions such as anxiety, sorrow, and guilt.

Padovani et al (10). investigated anxiety and depression in mothers of premature infants hospitalized in their neonatal intensive care unit. At the first assessment, when babies were hospitalized in the intensive care unit, the authors

determined anxiety or depression in 44% of the mothers. At the second evaluation, after patients had been discharged, the authors reported a decrease in anxiety levels but not in depression levels. In another study performed in a neonatal intensive care unit, mothers and fathers of infants were assessed in the 2nd and 6th weeks after birth; the incidence of depression in mothers in the 2nd week was 38.3%, and the mean depression score was 10.9. In the 6th week, incidence of depression was stable, whereas a decrease was observed in the depression score. The incidence of depression in fathers in the 2nd week was 11.7% and 10% in the 6th week (11). No significant differences were determined between maternal and paternal depression levels and depression scores in our study.

Curley and Meyer (12) reported that the most important needs of parents of children hospitalized in intensive care units included knowing their children were receiving the best care, being constantly by their children's sides, speaking with other parents, and performing religious observances. The mothers and fathers in the research group felt that their greatest need was to be understood by hospital personnel, which may be due to a desire to see that the intensive care unit understood and supported them at all times. In that context, it is important for the intensive care team to approach parents non-judgmentally and with empathy and to provide emotional support.

Conclusion

Depression levels in both mothers and fathers of children hospitalized in pediatric intensive care units are significantly higher than those of the normal population. This study might now be repeated with wider patient groups. Mothers and fathers of patients hospitalized in pediatric intensive care may be referred to the psychiatry department for support and treatment. A more detailed account of the child's clinical status could reduce the family's stress levels. This study reveals the need for mothers and fathers of patients to be given psychological counseling and psychiatric support.

References

1. Goldberg S, Morris P, Simmons RJ, Fowler RS, Levison H. Chronic illness in infancy and parenting stress: a comparison of three groups of parents. J Pediatr Psychol 1990;15:347-58.
2. Guntupalli KK, Rebbapragada VR, Lodhi MH, Bradford S, Burrus J, McCabe D, et al. Anxiety, depression and post-traumatic stress reactions in relatives of intensive care unit patients. Chest 2007;132(4 Suppl):549-50.
3. Potter LB, Rogler LH, Moscicki EK. Depression among Puerto Ricans in New York City: the Hispanic Health and Nutrition Examination Survey. Soc Psychiatry Psychiatr Epidemiol 1995;30:185-93.
4. Green MJ, Benzeyal M. Social class differences in anxiety and depression across the life-course: evidence from three cohorts in the west of Scotland. J Epidemiol Community Health 2009;63:19.
5. Kessler RC, Berglund P, Demler O, Koretz D, Jin R, Merikangas KR, et al. The epidemiology of major depressive disorder: results from the National comorbidity survey replication (NCS-R). JAMA 2003;289:3095-105.
6. Less IB. Symposium on chronic disease in children. Clinical Assessment: Physical and psychological functioning. Pediatr Clin North Am 1984;31:33-45.
7. Akçakın M, Erden G. Psychiatric symptoms in parents of children diagnosed with autism. Turk J Child Adolesc Ment Health 2001;8:2-10.
8. Bilal E, Dağ İ. The comparison of stress, locus of control and coping styles in mothers of children with mild mental disability and in mothers typically developing children. Turk J Child Adolesc Ment Health 2005;12:69-74.
9. Sharghi A, Karbakhsh M, Nabaei B, Meysamie A, Farrokhi AR. Depression in mothers of children with thalassemia or blood malignancies:a study from Iran. CPEMH 2006;2:27.
10. Padovani FHP, Linhares MBM, Carvalho AEV, Duarte G, Martinez FE. Anxiety and depression symptoms assessment in pre-term neonates' mothers during and after hospitalization in neonatal intensive care unit. Rev Bras Psiquiatr 2004;26:251-4.
11. Gönülal D, Yalaz M, Köroğlu Ö, Kültürsay N. Both parents of neonatal intensive care unit patients are at risk of depression. Turkish J Pediatr 2014;56:171-6.
12. Curley MA, Meyer EC, Scoppettuolo LA, McGann EA, Trainor BP. Parent presence during invasive procedures and resuscitation: evaluating a clinical practice change. Am J Respir Crit Care Med 2012;186:1133-9.