



Parental Anxiety Levels of Patients Admitted to Pediatric Emergency Clinic Due to Febrile Convulsion

Çocuk Acil Kliniğine Febril Konvülsiyon Nedeni ile Başvuran Hastaların Ebeveyn Anksiyete Düzeyleri

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Abstract

Aim: This study aims to determine the anxiety levels of the parents of patients admitted to the pediatric emergency clinic due to febrile convulsion, and to evaluate factors that may affect anxiety levels. In addition, it is aimed to investigate the effect of the febrile convulsion on parents' behavior and emotional status in order to improve our attitude towards parents in the future.

Material and Method: The study was done at Necmettin Erbakan University Meram Medical Faculty Hospital Pediatric Emergency Department between February 2017 and September 2018 with febrile convulsion and fever were included in this study. The patients were evaluated in two groups as those with febrile convulsion and those who complained of fever only. The State-Trait Anxiety Inventory was used to determine the level of anxiety of parents.

Results: Of the patients included in the study, 323 (48.6%) were admitted with febrile convulsion and 341 (51.4%) with fever complaints. When compared to the mean of the state anxiety score and the trait anxiety score between the groups, it was found that the mean of the state anxiety score was statistically higher in the febrile convulsion group than the non-seizure fever group ($p=0.001$), while the trait anxiety score was also high in the febrile convulsion group, but no statistical significance was found between the non-seizure fever group ($p>0.05$). When the anxiety level of parents was examined according to the number of seizures of the patients in the febrile convulsion group, it was found that the parents of patients with their first seizures were statistically significantly higher than their parents with multiple seizures ($p=0.007$, $p=0.001$). No statistical significance was found between the education level of the parents and their anxiety scores ($p>0.05$).

Conclusion: Parents of patients who have applied to health institutions with a fever complaint, providing fever and febrile convulsion training, explaining the first interventions to the patient who has a seizure, and raising awareness of the families reduce parents' worries and fears.

Keywords: Febrile convulsion, anxiety, parents, child, pediatric emergency

Öz

Amaç: Bu çalışmada febril konvülsiyon nedeniyle çocuk acil kliniğine başvuran hastaların ebeveynlerinin kaygı düzeylerinin belirlenmesi ve kaygı düzeylerini etkileyebilecek faktörlerin değerlendirilmesi amaçlanmıştır. Ayrıca, gelecekte ebeveynlere karşı tutumumuzu geliştirmek için ateşli konvülsiyonun ebeveynlerin davranışları ve duygusal durumları üzerindeki etkisinin araştırılması amaçlanmaktadır.

Gereç ve Yöntem: Çalışma Şubat 2017-Eylül 2018 tarihleri arasında Necmettin Erbakan Üniversitesi Meram Tıp Fakültesi Hastanesi Çocuk Acil Servisine konvülsiyon ve ateşle başvuran hastalar ve ebeveynleriyle yapıldı. Hastalar febril konvülsiyonu olan ve sadece ateş yakınması olan olmak üzere iki grupta değerlendirildi. Ebeveynlerin kaygı düzeyini belirlemek için Durumluk Sürekli Kaygı Envanteri kullanıldı.

Bulgular: Çalışmaya dahil edilen hastaların 323'ü (%48,6) febril konvülsiyon, 341'i (%51,4) ateş yakınması ile başvurdu. Gruplar arasındaki durumluk kaygı puanı ve sürekli kaygı puanı ortalaması karşılaştırıldığında, durumluluk kaygı puan ortalamasının febril konvülsiyon grubunda sadece ateşi olan gruba göre istatistiksel olarak anlamlı şekilde daha yüksek olduğu saptandı ($p=0,001$). Sürekli kaygı puanı da febril konvülsiyon grubunda daha yüksek saptandı ancak sadece ateşi olan grup ile arasında istatistiksel olarak anlamlı bir fark saptanmadı ($p>0,05$). Ebeveynlerin kaygı düzeyi, febril konvülsiyon grubundaki hastaların nöbet sayısına göre incelendiğinde, ilk nöbetleri olan hastaların ebeveynlerinin kaygısının çoklu nöbetleri olan ebeveynlerine göre istatistiksel olarak anlamlı derecede yüksek olduğu bulundu ($p=0,007$, $p=0,001$). Ebeveynlerin eğitim düzeyleri ile kaygı puanları arasında istatistiksel olarak anlamlı bir fark saptanmadı ($p>0,05$).

Sonuç: Sağlık kurumlarına ateş şikayeti ile başvuran hastaların ailelerine, ateşe yaklaşım ve febril konvülsiyon eğitimi verilmesi, nöbet geçiren hastaya yapılması gereken ilk müdahalelerin açıklanması ve ailelerin farkındalığının artırılması, ebeveynlerin endişe ve korkularını azaltmaktadır.

Anahtar Kelimeler: Ateşli konvülsiyon, anksiyete, ebeveyn, çocuk, çocuk acil



INTRODUCTION

Febrile convulsion (FC) is defined as a type of seizure accompanied by fever in children between the ages of six months and five years without any central nervous system disease or electrolyte imbalance.^[1] FC is the most common neurological disorder of infants and young children. FC occurs in 2-5% of children under the age of five. The risk of mortality and morbidity in FC is very low and there is no detectable brain damage associated with FC.^[2]

Although the FC is a type of seizure in benign character, the clinical condition resulting as a result of seizures causes fear and anxiety in parents.^[3] This can bring impairment to the quality of life of the family, and parents may suffer from long-term anxiety and insecurity when their children develop fever.^[4]

This study aims to determine the anxiety levels of the parents of patients admitted to the pediatric emergency clinic due to FC, and to evaluate factors that may affect anxiety levels. In addition, it is aimed to investigate the effect of the FC on parents' behavior and emotional status in order to improve our attitude towards parents in the future.

MATERIAL AND METHOD

Patients who were admitted to Necmettin Erbakan University Meram Medical Faculty Hospital Pediatric Emergency Department between February 2017 and September 2018 with FC and fever were included in this study. The patients were evaluated in two groups as those with FC and those who complained of fever only. The age, gender, number of seizures, parent age and level of education of the parents were recorded by the clinician. Those who did not agree to participate in the study, who had another chronic disease and those over the age of five for the seizure-free group were excluded from the study. The scales were applied to one of the parents who wanted to be included in the study. The State-Trait Anxiety Inventory (STAI) was used to determine the level of anxiety of parents.^[5] The STAI is used to measure anxiety levels in adults and has two multiple-choice subscales with 20 questions for state and trait anxiety. Each item is scored 1, 2, 3 or 4 according to the severity of the indication. State anxiety defines the anxiety of the individual feels at a certain time. Trait anxiety describes the individual's general anxiety predisposition. The scores obtained from the scale vary between 20-80 points. Low score indicates low anxiety level and high score indicates high anxiety level.

Statistical analysis of the study was done using the SPSS 20.0 package program. Identifying analyses were used in the analysis of the distribution and frequency of data, and chi-square tests were used to compare two independent groups in frequency data. Independent T-testing was used to compare the average of the two independent groups. The level of significance in all statistical analyses was considered $p < 0.05$.

RESULTS

This study included 664 patients who admitted to the pediatric emergency clinic of Necmettin Erbakan University Meram Medical Faculty Hospital between August 2017 and September 2018 with febrile convulsions or only fever. Of the patients included in the study, 323 (48.6%) were admitted with FC and 341 (51.4%) with fever complaints. The average age of patients and the distribution of them by gender are shown in **Table 1**. It was determined that 170 (52.6%) of the FC patients had first seizures and 153 (47.4%) had more than one seizure. STAI was applied to the mother of 502 (75.6%) of the participants and 162 (24.4%) to his father. The mean age of all parents was 33.72 ± 8.53 years old, while those in the FC group were 35.16 ± 9.20 and 32.35 ± 7.61 in the non-seizure fever group. 344 (51.8%) of parents were primary school, 134 (20.2%) were secondary school, 65 (9.8%) were high school and 121 (18.2%) were university graduates.

Table 1. Mean age of patients and distribution by gender

	Febrile seizure	Fever	Overall
n (%)	323 (48.6%)	341 (51.4%)	664 (100%)
Gender n (%)	Female	129 (37.8%)	292 (44%)
	Male	212 (62.2%)	372 (56%)
Age (month)	38.15 ± 11.03	38.28 ± 11.07	38.21 ± 11.04

The mean state anxiety score of all patients was 49.58 ± 15.02 , and mean trait anxiety score was 35.70 ± 11.36 . When compared to the mean of the state anxiety score and the trait anxiety score between the groups, it was found that the mean of the state anxiety score was statistically higher in the FC group than the non-seizure fever group ($p = 0.001$), while the trait anxiety score was also high in the FC group, but no statistical significance was found between the non-seizure fever group ($p > 0.05$) (**Table 2**).

Table 2. Parental State and Trait Anxiety Scores

	Febrile seizure Parent	Fever Parent	p
State Anxiety Point Mean	53.50 ± 12.63	45.86 ± 16.15	0.001
Trait Anxiety Point Mean	39.92 ± 12.41	31.71 ± 8.54	>0.05

Compared to the mean of anxiety scores among parents in the FC group; the mean of the anxiety score of the state anxiety score was statistically significantly higher in mothers (56.04 ± 12.08) than fathers (48.00 ± 12.07) ($p = 0.001$), but the mean scores of trait anxiety were not found between the parents ($p > 0.05$). In the seizure-free fever group, the mean state anxiety scores and trait anxiety scores were not found statistically significant among parents ($p > 0.05$).

When the anxiety level of parents was examined according to the number of seizures of the patients in the FC group, it was found that the parents of patients with their first seizures

were statistically significantly higher than their parents with multiple seizures ($p=0.007$, $p=0.001$). No statistical significance was found between the education level of the parents and their anxiety scores ($p>0.05$).

DISCUSSION

In our study, it was determined that the parents of patients with FC had higher anxiety scores than the group with fever only, the anxiety scores of the families who had seizures for the first time were higher than the group with multiple seizures, and the anxiety scores of the mothers were higher than the fathers.

One of the most common reasons for applications to pediatric emergency departments is fever. When a child is brought to the hospital for any reason, the anxiety level of their family members increases and they worry. In 1980, "fever phobia" was defined by Schmitt by determining that fever was a concern for families and caregivers.^[6] Most parents who are concerned about fever; they fear a severe disease, adverse effects of fever, or the possibility of a febrile seizure.^[7,8] In the study of Stuijvenberg et al.^[4] the emergence of febrile seizures during high fever has been shown to be an important problem for parents. In a study examining the attitudes and behaviors of parents about fever in children in our country, it was reported that families experienced panic, anxiety, and misappropriations related to fever, and it was concluded that management of the febrile child could be better done with ongoing trainings.^[9] In our study, we compared the anxiety level of families of children with FC and those of children with fever only. In our study, it was found that the parents of patients with FC had higher anxiety scores than the parents of children with only fever. In addition, the mean of state anxiety score was higher in both groups than the mean of trait anxiety point. This shows that current situations increase the level of anxiety of families similar to the literature.

Although FC in children is a benign and self-limiting condition in most cases, witnessing such seizures is a terrible experience for most parents.^[10,11] Parents feel panic when they witness their child being shaken, and many think that their child may die.^[12] There are many studies in the literature about the responses of parents during and after FC.^[13-15] These responses include physical, psychological and behavioral symptoms and cause poor quality of life of families. Parents may feel extreme anxiety and fear, and may think their children are weak and vulnerable.^[16] Huang et al.^[17] organized a training program among parents of children with FC, investigating the effects on knowledge, attitudes, anxieties, and first aid approaches. In this study, although there was only a slight change in fever-related anxiety, it was found that there was a significant improvement in knowledge, attitude, anxiety and first aid practice in the FC group after the training. In addition, it was determined that the training package about FC had an important effect on the anxiety of the mothers of children with FC who were treated in the hospital. In a similar

study by Rofiqoh et al.^[18] it was concluded that the FC training package could be used as an alternative treatment to reduce anxiety levels in mothers. In our study, we found that the anxiety level of these families was high in accordance with the literature. Giving trainings about fever and FC in emergency departments is important because it will learn the relationship between fever and FC, understand the usual good prognosis and thereby reduce parental anxiety.

Traditionally, mothers have a greater responsibility for childcare. Therefore, mothers may be more anxious due to the future of their child, insecurity, pain of their child during treatment and a sense of responsibility towards their family.^[19] In the study of Rutter et al.^[20] it was determined that 82% of the children who had FC had family members during the seizure and 50% of these children had only their mother. In our study, when the mean of anxiety point between parents were compared; it was determined that the mean of state anxiety scores were statistically higher in mothers than fathers ($p=0.001$). This reveals the importance of evaluating the emotional responses of parents, especially mothers, by health professionals and supporting them when necessary. It is thought that informing these people about the disease will both decrease the level of anxiety and that mothers can provide positive support to their sick children.

Flury et al.^[21] reported that family anxiety during the first seizure was associated with lower education levels, and special and repetitive education could provide an important advantage for these families. Shuper et al.^[3] found a significant relationship between low level of knowledge and high level of anxiety. Similarly, in our study, both the state and continuity anxiety point averages of the parents of patients with first seizures were found to be statistically significantly higher than the families of patients with more than one seizure. This reveals that the information provided to the families of patients with recurrent seizures significantly reduces the level of anxiety and how important the education which is given about the diseases besides the medical treatments applied in the hospitals.

CONCLUSION

Parents' fear of fever and febrile seizures is one of the major problems with several negative consequences for daily family life. Giving trainings on fever and FC to the families of patients who applied to health institutions with complaints of fever, explaining the first interventions that should be done to the patient who had a seizure, and raising the awareness of the families will both reduce the anxiety and fears of the parents who encounter this situation for first time, and ensure that the families bring their patients to the health institution by making appropriate interventions.

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Search: E.T, A.Y, F.A; Writing: E.T, A.O.K, N.U (All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version)

ETHICAL CONSIDERATIONS

Ethics Committee Approval: In this research, the data before 2020 was used and the research was concluded before 2020. According to the Regulation on Clinical Researches published in the Official Gazette of the Republic of Turkey with the number 28617 dated 3 November 2015, the ethics committee approval was not obtained in accordance with the article "This Regulation includes bioavailability and bioequivalence studies, medicines, medicinal and biological products to be made on humans, even if licensed or permitted. (article 2-(1))". So clinical survey studies are outside the scope of the regulation. This study was prepared in accordance with the Law on Protection of Personal Data, by anonymizing patient data and in accordance with the 2013 Brazil revision of the Helsinki Declaration and guidelines for Good Clinical Practice.

Informed Consent: Written informed consent was obtained from all participants who participated in this study.

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