

ORIGINAL ARTICLE

Özgün Araştırma

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Geliş tarihi / Received : February 02, 2023

Kabul Tarihi / Accepted : July 26, 2023

E-Yayın Tarihi / E-Published : May 01, 2024

Cite this article as

Bu makalede yapılacak atf

Yıldız Silahlı N, Guler BN.
Parental Vaccine Acceptance and
Refusal Among Neonatal Period;
Single Center Retrospective Study

Akd Med J 2024;10(2): 261-264

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Parental Vaccine Acceptance and Refusal Among Neonatal Period; Single Center Retrospective Study

Yenidoğan Döneminde Ebeveyn Aşı Kabulü ve Reddi; Tek Merkezli Retrospektif Çalışma

ABSTRACT

Objective:

Vaccine hesitancy is a world-wide public health problem still persisting despite the mounting scientific evidence of the positive effects of vaccines on community health. The prevalence and causes vary based on cultural and sociological characteristics. In our study, we aimed to evaluate the situation of vaccine acceptance among parents who gave birth in our hospital.

Material and Methods:

This study is a retrospective descriptive study. The medical and vaccination records of mothers and babies born between June 2017 and June 2022 at Istanbul Medipol University Education and Research Hospital were examined. Socio-demographic data, mother's age, prenatal, natal and postnatal history, baby's gender, birth weight, vaccines and vitamin K status were recorded on the data form. SPSS software was used for statistical analysis. The study was approved by the Istanbul Medipol University Ethics Committee. Informed consent form was not signed by participants as the study was designed as a retrospective study. The study complies with the Declaration of Helsinki.

Results:

Over the course of a five-year period, our hospital recorded a total of 15,417 births. The population of the study was made up of 192 (1.24%) cases, registered in epicrisis and infant birth records as vaccine refusal. The Mean age of mothers was 30.72 and the mean gestation week was 38.28 weeks. Mean birth weight of the babies was 3008.78 grams and 56.25% of the babies were male. A total of 61.73% (n = 121) of the cases declined the administration of vitamin K.

Conclusion:

Vaccination is the most effective method of preventing infectious diseases. Vaccination, one of the basic elements of preventive medicine in child health monitoring, should be carried out uninterruptedly. As a result, vaccine hesitancy rates can be reduced by partnering with each healthcare worker in solution strategies to increase vaccine acceptance. Education and awareness studies are also needed in this regard.

Key Words:

Vaccination, Parental acceptance, Vaccine hesitancy

ÖZ

Amaç:

Aşı kararsızlığı, aşıların toplum sağlığı üzerindeki olumlu etkilerine dair artan bilimsel kanıtlara rağmen hala devam eden dünya çapında bir halk sağlığı sorunudur. Yaygınlık ve nedenleri kültürel ve sosyolojik özelliklere göre değişir. Çalışmamızda, hastanemizde doğum yapan ebeveynlerin aşı kabul durumlarını değerlendirmeyi amaçladık.

Gereç ve Yöntemler:

Bu çalışma retrospektif tanımlayıcı bir çalışmadır. İstanbul Medipol Üniversitesi Eğitim ve Araştırma Hastanesi'nde Haziran 2017 ile Haziran 2022 tarihleri arasında doğan anne ve bebeklerin sağlık ve aşı kayıtları incelendi. Veri formuna sosyo-demografik veriler, annenin yaşı, doğum öncesi, doğum ve doğum sonrası öyküsü, bebeğin cinsiyeti, doğum ağırlığı, aşıları ve K vitamini durumu kaydedildi. İstatistiksel analiz için SPSS yazılımı kullanıldı. Çalışma izni İstanbul Medipol Üniversitesi Etik Kurulundan alındı. Çalışma retrospektif olarak planlandığından bilgilendirilmiş onam formu katılımcılar tarafından imzalanmadı. Çalışma Helsinki Bildirgesine uygundur.

Bulgular:

Hastanemizde 5 yıllık dönemde gerçekleşen toplam doğum sayısı 15,417 idi. Araştırmanın evrenini epikriz ve bebek doğum kayıtlarında aşı red formu imzalamış olarak kayıtlı olan 192 (%1,24) olgu oluşturdu. Annelerin ortalama yaşı 30,72, ortalama gebelik haftası 38,28 hafta idi. Bebeklerin ortalama doğum ağırlığı 3008,78 gram olup, bebeklerin %56,25'i erkekti. Olguların %61,73'ünün (n: 121) K vitamini uygulamasını kabul etmediği kayıtlı idi.

Sonuç:

Aşılama bulaşıcı hastalıklardan korunmanın en etkili yöntemidir. Çocuk sağlığı takibinde koruyucu hekimliğin temel unsurlarından biri olan aşılama kesintisiz olarak yapılmalıdır. Sonuç olarak, aşı kabulünü artırmaya yönelik çözüm stratejilerinde her sağlık çalışanı ile ortaklaşa çalışarak aşı tereddüt oranları azaltılabilir. Bu konuda eğitim ve bilinçlendirme çalışmalarına da ihtiyaç vardır.

Anahtar Kelimeler:

Aşılama, Ebeveyn kabulü, Aşı tereddütü

INTRODUCTION

Vaccine hesitancy is a world-wide public health problem still persisting despite the mounting scientific evidence of the positive effects of vaccines on community health (1). The World Health Organization (WHO) classified vaccine hesitancy as one of the top-ten global health threats in 2019 (1). The reasons underlying vaccine hesitancy are complex and can be caused by a combination of social, cultural, political, and personal factors (1, 2). The prevalence and causes vary based on cultural and sociological characteristics (2, 3). Therefore, it is recommended to develop local strategies focused on solutions by identifying the current situation (3,4). Between 2011 and 2014 in our country, 79% of reported cases of vaccine refusal were classified as undervaccinated, while 21% were

classified as unvaccinated (5). According to data derived from the Turkish Demographic and Health Survey (TDHS-2018), 2% of children aged 12-23 months were not vaccinated at all, while only 50% of 24-35 month old ones were vaccinated according to age (6). According to official data, there was a 9% decrease in the rate of full vaccination in children and infants in Turkey in 2019, indicating that vaccine hesitancy is also a current and widespread problem in our country (5). However, there is no epidemiological study revealing the reasons and prevalence of vaccine hesitancy in Turkish literature (7-9). In descriptive studies on vaccine hesitancy, factors such as health literacy, individual vaccine experiences, social norms, individual awareness, and potential risk-benefit relationships have been reported to influence vaccine acceptance, thus it is of big importance to develop local solution strategies by evaluating the current situation (8-11). In our study, we aimed to evaluate the situation of vaccine acceptance among parents who gave birth in our hospital.

MATERIAL and METHODS

This study is a retrospective descriptive study. The medical and vaccination records of mothers and babies born between June 2017 and June 2022 at Istanbul Medipol University Education and Research Hospital were examined. Socio-demographic data, mother's age, prenatal, natal and postnatal history, baby's gender, birth weight, vaccines and vitamin K status were recorded on the data form. SPSS software was used for statistical analysis. Data was presented in numbers and percentages. The study was approved by the Istanbul Medipol University Ethics Committee on 05.05.2022/numbered 2753. Informed consent form was not signed by participants as the study was designed as a retrospective study. The study conforms to the Declaration of Helsinki and its subsequent amendments or equivalent ethical standards. All procedures performed in studies involving human participants with ethics committee approval were performed in accordance with the ethical standards of the institutional and/or national research committee.

RESULTS

Over the course of a five-year period, our hospital recorded a total of 15,417 births. Considering the number of births by years, there were 714 births in 2017 (June-December), 2206 in 2018, 3956 in 2019, 3420 in 2020, 3635 in 2021 and 1486 in the first 6 months of 2022, respectively. The study population consisted of 192 cases, representing 1.24% of the total, as documented in both the epicrisis and infant birth records, indicating vaccine rejection. Considering the distribution of cases by years, 18 (9.3%) cases in 2017, 25 (13.0%) in 2018, 30 (15.6%) in 2019, 37 (19.2%) in 2020, 44 (22.9%) in 2021 and 37 (19.2%) in 2022 did not get vaccinated by signing the "vaccine rejection" form. The mean age of mothers was 30.72 (min: 20; max: 45) and the mean gestation week was 38.28 weeks (min: 32; max: 42; missing: 22). When evaluated in terms of prenatal history of the mothers, the mean gravida was 2.18 (min: 1; max: 7; missing: 32), the mean parita was 0.92 (min: 0, max: 4; missing: 29) and the mean number of abortions was 0.33 (min: 0, max: 9; missing: 34). Also, the mean

birth weight of the babies was 3008.78 grams (min: 2060 grams; max: 4780 grams; missing: 10) and 56.25% of the babies were male (n: 108) and 43.75% (n: 84) were female. While a majority, comprising 61.73% (n: 121) of the parents, declined vitamin K administration, 36.45% (n: 70) consented to receive it. One case's vitamin K acceptance status could not be reached. When evaluated by year, 10 cases (5.2%) in 2017, 12 cases (6.25%) in 2018, 15 cases (7.81%) in 2019, 11 cases (5.72%) in 2020, 18 cases (9.37%) in 2021 and 4 cases (2%) in 2022 did not accept vitamin K administration.

DISCUSSION

With the widespread use of vaccines, the incidence of numerous infectious diseases has decreased. However, modern parents who have never encountered these diseases themselves have come to question the necessity of vaccination (11-13). In today's world where information is spreading rapidly, parents are hesitant about vaccination due to the content, undesirable side effects, negative experiences with vaccines and disinformation (12, 13). Among the main reasons for this hesitancy in the studies stand out as the immaturity of the immune system of the children and the fear of disease (12, 14, 15). This has led to the need for healthcare professionals to become more equipped on the subject and to provide access to the right information sources (13-15). Studies show that parents with vaccine hesitancy are affected by their social environment and their existing negative experiences about vaccines affect vaccine acceptance (14, 16). Our study draws attention to the hesitation among parents regarding vaccine acceptance in current practice. The distribution of parents who signed a vaccine refusal form in our center was 1.24%. Although this rate is remarkable determining the current prevalence by conducting epidemiological studies on this issue will be beneficial in terms of solution recommendations. Studies indicate that parents learn about vaccines before and during pregnancy and make a decision on this issue (14, 17-19). While field studies in our country emphasize that parents often get informed about vaccines by healthcare professionals, it indicates that media platforms are frequently used as a source of information in studies abroad (15-18). Considering the fact that our study population consists of new mothers who have just given birth, it once again draws attention to the value of accessing accurate information about vaccines before and during pregnancy (19-22). In addition to raising social awareness, providing family access to scientific information about vaccines during pregnancy follow-up let us think that vaccine acceptance will increase (15, 20, 21). Our Ministry of Health's free immunization scheme makes it easier to accept immunization (5, 7, 8). However, with the increasing prevalence of vaccine hesitancy, the number of signed refusal forms is increasing day by day (1, 5, 22). In our study, there has been a significant increase over the years in the number of parents who have signed a vaccine refusal form at our hospital. Epidemiological studies are needed to determine the population prevalence. The identification of regions where vaccine hesitancy is common and the development of local solutions are particularly important (15, 21, 22). The World Health Organization defines vaccine hesitancy as a manageable condition (1). Vaccine acceptance

has been shown to rise in direct proportion to scientific and detailed information provided in immunization centers and to health professionals' awareness of this issue (1, 19-21). In discussions with the family, it is recommended to provide specific, scientific, unbiased information that addresses the parents' fears, empathizes with them and encourages them (1, 19, 22). Vaccine acceptance may be increased by clearly presenting the possible negative outcomes, especially in the case of vaccine-preventable diseases, and providing striking examples. Vaccination should be recommended in every encounter with vaccine-hesitant families by repeatedly sharing scientific information in a non-judgmental manner.

Limitations

Our study is a retrospective descriptive study. There is a need for new studies to evaluate the causes of vaccine hesitancy and to offer solutions.

CONCLUSION

Vaccination is the most effective method of preventing infectious diseases. Vaccination, one of the basic elements of preventive medicine in child health monitoring, should be carried out uninterruptedly. For this reason, it is important to prevent vaccine hesitancy and to raise awareness by drawing attention to the importance and seriousness of the issue. Health authorities need to develop strategies and programs to increase public vaccine acceptance. As a result, vaccine hesitancy rates can be reduced by partnering with each healthcare worker in solution strategies to increase vaccine acceptance. Education and awareness studies are also needed in this regard.

Ethics Committee Approval:

This research complies with all the relevant national regulations, institutional policies and in accordance with the tenets of the Helsinki Declaration, and has been approved by the Istanbul Medipol University Ethics Committee, İstanbul Medipol University, İstanbul (approval number: 2022/2753).

Informed Consent:

Informed consent form was not signed by participants as the study was designed as a retrospective study. The study complies with the Declaration of Helsinki.

Author Contributions:

Concept – N.Y.S.-Design – N.Y.S. B.G.; Supervision - N.Y.S.; Resources – N.Y.S, B.G.; Materials – N.Y.S.; Data Collection and/or Processing -N.Y.S.,B.G.; Analysis and/ or Interpretation - N.Y.S.; Literature Search - N.Y.S.; Writing Manuscript - N.Y.S.-Critical Review - N.Y.S.

Conflict of Interest:

The authors have no conflict of interest to declare.

Financial Disclosure:

The authors declared that this study has received no financial support.

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