

A research on examination of medical errors through court judgments

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Abstract

Aim: Medical errors are one of the most important and chronic problems of health care systems. In this study, medical error cases decided by the Supreme Court were examined.

Material and Methods: The work is retrospective, descriptive and analytical, and it is limited to civil court decisions on a suit for error. Sixty court decisions that were randomly selected in the study were obtained via www.yargitay.gov.tr and www.kazanci.com.tr. The decisions were examined in detail by researchers.

Results: According to the research result, it is understood that the medical errors mostly occur in gynecology and obstetrics and general surgery branches. Treatment errors are the most important cause of medical errors. Material and moral damage ranks first, and death ranks the second due to medical errors. It has been revealed that the predominant responsibilities of medical errors are on physicians in large part. The two most common causes of medical errors are the choice of the wrong treatment method and surgical errors.

Conclusion: In the light of the analyzes, it is seen that medical errors are largely human-induced factors. Therefore, establishing mechanism to minimize medical errors, increasing the level of awareness of medical staff about medical errors, to minimize wrong treatment method and surgical errors thought to be effective strategies to prevent medical errors.

Keywords: Health; Medical Error; Physicians; Court Decisions.

INTRODUCTION

With the report of the American Institute of Medicine published in 1999, the issue of medical error has become an important subject at international level. According to the report, at least 44,000 to 98,000 patients die each year due to medical errors. The cause of death resulting from medical errors is in the 8th place among all death reasons. The cost of injuries resulting from medical errors is between \$ 17 million and \$ 29 million(1).

These medical errors are posing a grave threat to human health and are becoming chronic within the health care system(2). According to Institute of Medicine, medical error is defined as the failure of an intended operation in the way that is originally planned or applying a wrong set of actions to receive the intended results (4). According to Turkish Medical Association Medical Ethics Rules, the impairment of a patient due to ignorance, inexperience, or indifference, is a bad implementation of the medical profession(5).

Generally, medical error is divided into two, diagnosis and

treatment error. If a physician can not diagnose an obvious disease because of inattention and lack of experience, and if she/he interprets this disease against standard medical science procedures, it is possible to talk about the existence of a medical error based on misdiagnosis. If the medical intervention is necessary; and for various reasons, the intervention is delayed resulting in the impairment of the patient, it is perceived as a treatment error. On the other hand, medical intervention in cases where it is not necessary is also considered as a treatment error. Failure to perform a medical intervention, forgetting foreign substances in the patient's body, choosing the wrong treatment method, not performing the necessary tests, wrong drug application, patient mixing, wrong side surgery and failure to comply with infection and hygiene rules is also considered as treatment error (6).

According to the Medical Deontology Ordinance, the physician diagnoses according to scientific necessities and conducts the necessary treatment. These provisions, which are included in the legislation, indicate that physicians and health professionals must follow and

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implement medical standards (3). In healthcare provisions, physicians and other health workers are expected to provide medical services at certain medical standards.

This condition, which is expressed as a care obligation, can be best explained by the act of complying with the "medical rules and requirements" of health professionals. The medical care obligation of physicians and other healthcare professionals means that they are to isolate the medical error from the complication. In the healthcare delivery process, even if all healthcare professionals fulfill all the requirements of medical standards, in some cases there may occur undesirable results (7). Besides, when the complication occurs, the physician is obliged to manage this process in the best way possible. If this process is not managed properly, the complication may turn into a medical malfunction (8).

Health professionals often work in a dynamic environment. For example, vital decisions in emergency services must be taken within seconds. It is inevitable that mistakes, in such health services, which are difficult and very complicated environments, will arise from the reasons mentioned above (2). A medical error has negative consequences both for the patient and her/his family as well as the health worker. In terms of patient and family, physical, psychological and financial problems lead to a number of negative consequences while those are psychological and material problems for the health workers (9). In addition to the negative impact on human health, it also leads to reduced confidence in health workers (10). As it can be seen, the medical errors in the healthcare system have huge impacts on human health. Therefore, in this study, it is aimed to examine cases of medical errors ruled by the court judgements.

MATERIAL and METHODS

Aim and importance

The aim of this study is to examine the cases of medical errors ruled by the Supreme Court. Examining the patients, units, or departments, and the reasons why medical errors are occurring along with the consequence (s) for the patient are important aspects of the study. Besides, the identification of who is responsible for medical errors and the investigation of the root causes of medical errors constitute another important aspect of the study.

Technique and Method

This study is retrospective, descriptive in terms of revealing the problem, analytical in terms of investigating the root causes of the errors. Descriptive work is the work that describes or depicts the event or situation.

Descriptive studies are very important in determining the problems and lead to analytical work. In this study, after a general framework for medical error with a descriptive approach was first established, the root causes of medical errors were investigated by Pareto Analysis with an analytical approach.

This work is limited to cases of compensation by the

Supreme Court jurisdiction. The Supreme Court has archived medical error resolutions linked to the year 2006 and later. A total of 99 cases were made on screening using the "medical error" keyword. Earlier cases were obtained by using www.kazanci.com.tr. It was understood that there were 27 cases before 2006. Thus, the 126 cases obtained constitute the universe of the research. A new order has been obtained in which cases are randomly ordered rather than the order of cases obtained before assigning figures to cases. A number representing each case from the first one to the final is given (from 1 to 126).

Thus, the sampling framework for research was established. When the literature is examined, it has been determined that the number of cases that have been examined regarding medical errors varies. Can et al (13) examination of 30 files transferred to the Supreme Court is an example of this situation. In this study, the sample size was limited to 60 cases and it was considered that this number was sufficient in the light of the related literature.

A simple random sampling method was used in the selection of the cases to be investigated within the framework of the sampling determined in the study. The obtained sample frame was entered into SPSS (Statistical Package for the Social Sciences) 20.0 program and simple random sampling cases were made. Afterward, the number of randomly selected cases was determined and the cases to be included in the investigation were determined.

It is necessary to determine in which year the medical error decisions were made by the court or what the patient complaints are, what hospitals and departments are referred to, which hospitals and departments have the most medical errors, what the problem emerging from the patient point of view of the medical error is, who the responsible person of the medical error.

Data Collection Tool

To obtain decisions, www.yargitay.gov.tr and www.kazanci.com.tr internet addresses were used. The decisions are limited to the compensation cases resolved civil courts of Supreme Court. These internet addresses are reliable sources of data and they are heavily used in research on medical errors.

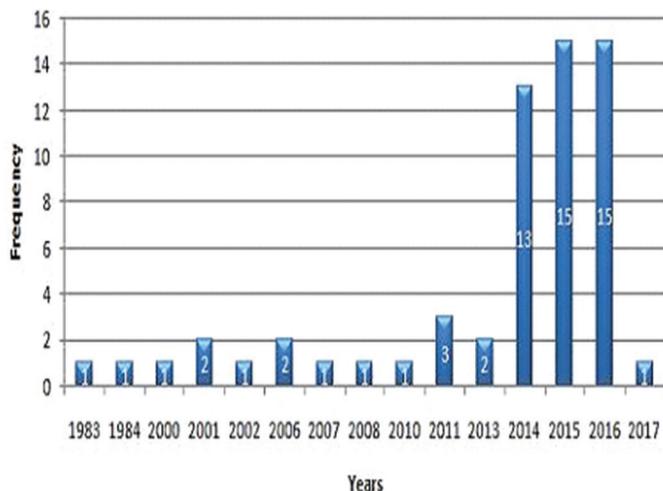
Limitations of the Research

In our research, only compensation cases on medical errors were examined so that it is a limitation of our study. The other limitation of our study is that the medical error cases that were passed on to the Supreme Council of Health and the Forensic Medicine were not reached.

RESULTS

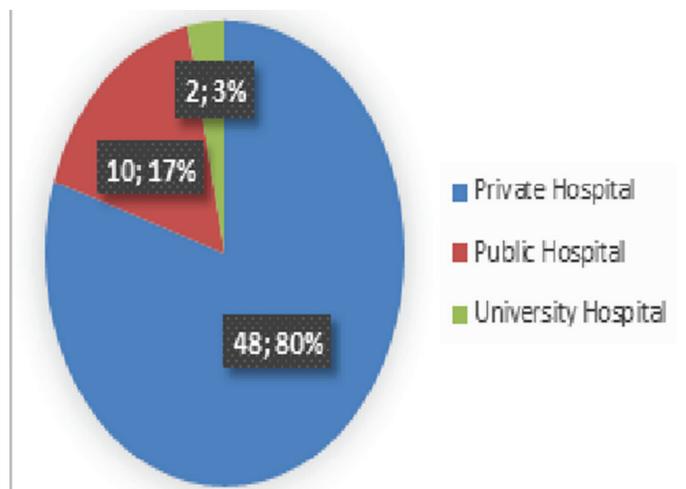
The distribution of medical errors by years has been examined based on the year in which the civil courts have ruled and is shown in Graph 1.

Graph 2 displays that patients are exposed to medical error as a result of which hospital they have applied.



Graph 1. Distribution of Medical Errors Examined by Decision Year

It is observed that the medical errors occurred mostly in the recent period of time. When the Graph1 is examined, it is understood that the cases connected to the court in the year 2000 are observed in 1 case or 2 cases, but the cases connected to the courts starting from 2014 are 13 and above.



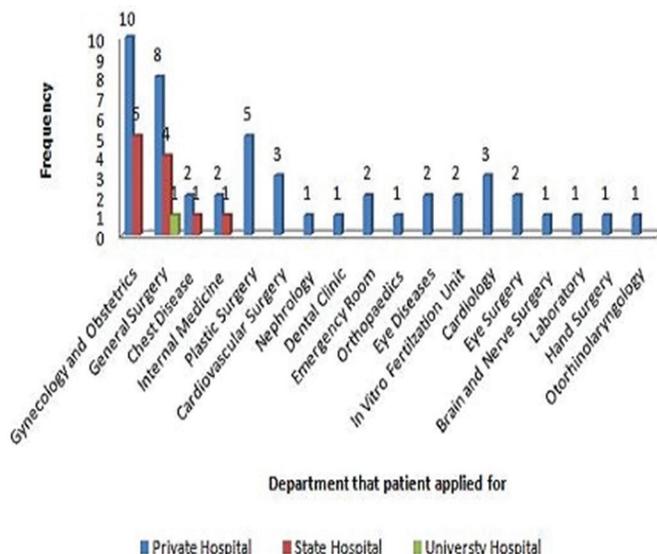
Graph 2. Distribution of Patient Applications by Hospitals

The vast majority of patients (80%) exposed to medical error have applied to private hospitals. Based on the decisions, it can be said that patients are more likely to be exposed to medical error in private hospitals. Patients who apply to the public and the university hospitals are exposed to the medical error are equal to one-fourth of those who are exposed to the medical error resulting from the application to the private hospital.

Graph 3 summarizes in which department of the hospital the patients are exposed to medical error as a result of their application.

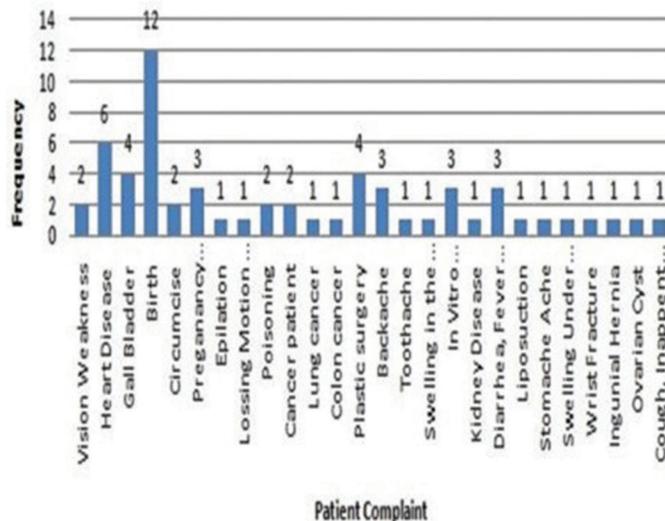
Graph 4 summarizes the types of complaints patients have when they applied to hospitals.

Graph 5 displays medical errors that patients were exposed in hospitals.



Graph 3. Distribution of Patients According to the Participated Department

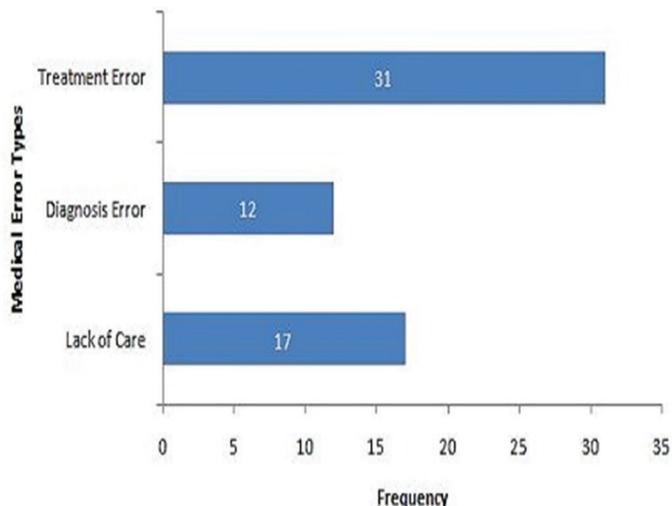
Patients applied more to private hospital departments. Patients who applied to private hospital units constitute approximately 80% of the patients who have applied for hospitals. Patients most commonly referred to private hospitals for gynecological and obstetric (10 people), general surgery (8 people) and plastic surgery (5 people). In the second place, patients applied to a department of gynecology and obstetrics (5 people) and general surgery (4 people) of public hospitals. The number of patients who applied to university hospital is 1. Graph 3 clearly shows that medical errors most often occur in private hospitals based on decisions.



Graph 4. Distribution of Hospital Applications According to Patient Complaints

According to the decisions, it is seen that the patients are mostly applied to hospitals (12 people) for gynecology and obstetrics. Patients with heart disease (7 people) are the second most frequent group applying to the hospital. The third most frequent patients group apply to hospitals are

gall bladder complaints, aesthetic surgery, backache, in vitro fertilization, diarrhea, fever, and fatigue complaints.



Graph 5. Distribution of Medical Error Types

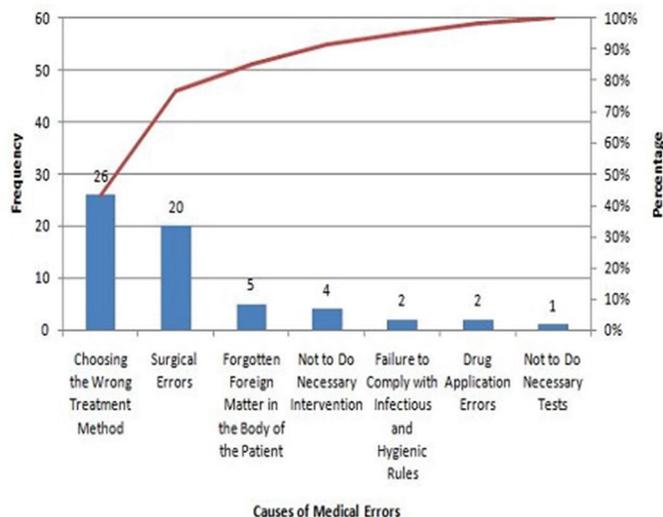
When Graph 5 is examined, it is understood that exposure to the medical error is mostly caused by the treatment error (31 persons). On the other hand, patients exposed to medical error were found to subject a medical error due to carelessness (17 people) and diagnosis error (12 people).

In the context of the examined cases, Pareto Analysis has been performed to observe the root causes of medical errors in detail, and the results are shown in Graph 6.

Graph 7 displays which medical errors occurred in which type of hospitals, and what were the consequences of medical errors.

Graph 8 displays in which parts of the hospital's medical errors occurred, and what were the consequences.

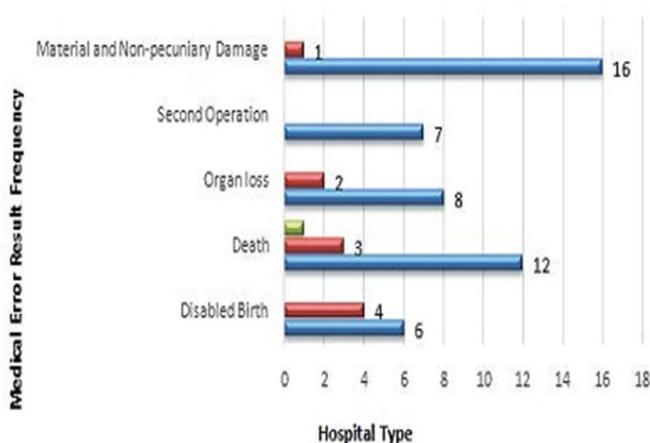
Graph 9 displays who is responsible for medical error as a consequence of the cases ruled by civil courts.



Graph 6. Pareto Graph for Causes of Medical Errors

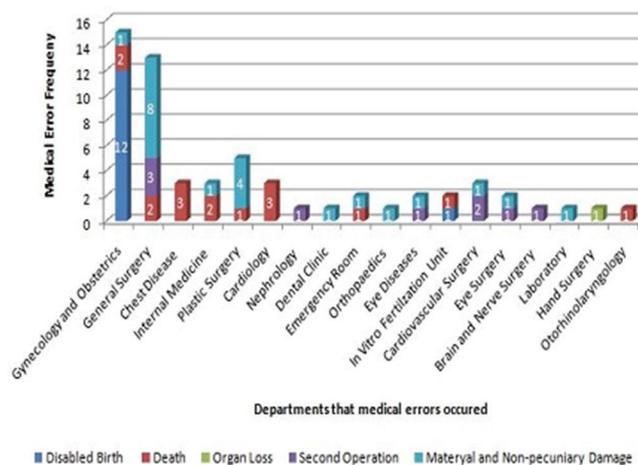
When Graph 6 is examined, it is seen that about 80% of medical errors are due to the selection of the wrong

treatment method and surgical error. The mistakes made while choosing the wrong methods for the patient's treatment, mistakes made when the patients operating are the main causes of medical errors. It has been understood that medical errors originating from other causes have a small share in the decisions.



Graph 7. Distribution of Medical Error Results by Hospital Type

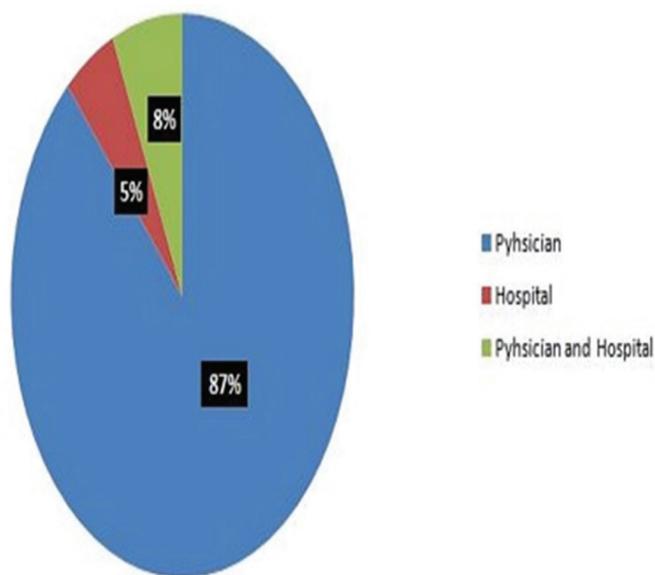
When cases are examined in the context of the hospitals and their outcomes, it has been understood that medical errors most often occur in private hospitals and in material and moral damage (16 persons). Similarly, the number of patients who underwent surgery for a second time as a result of a medical error in private hospitals is 7. The number of deaths resulting from medical errors in private hospitals is considerably higher than the number of deaths in public and university hospitals. In addition, the loss of limb and injured birth resulting in medical errors in private and public hospitals is not to be underestimated.



Graph 8. Distribution of Medical Error Results According to Departments of Hospitals

When cases are analyzed according to the departments and the results it reveals, it has been understood that the medical errors most often occur in the gynecological and obstetric departments and that a large part (12) is the result of the disabled birth. The second and third places are death (2 people) and material and moral damage (1

person). The second most common part of medical errors (13 people) occurring is the general surgery. The majority of errors made by the general surgeon arise as material and moral damage (8 persons). Secondly, the outcome is that patients have to be operated for the second time. In the third place, the department where the most medical errors are made (5 people) is the plastic surgeon. As a result of the medical errors, mostly physical and moral damage has occurred and even death has occurred. It can be said that the deaths due to medical errors after the application to chest diseases, internal medicine, and cardiology departments are also remarkable.



Graph 9. Distribution of Who is Responsible for Medical Error

According to the cases examined, it was determined that the physicians were responsible mostly for the medical errors. Physicians were responsible for medical errors in 87% of the cases. On the other hand, medical errors, which the physician and the hospital are responsible for, comes second with an 8% share.

DISCUSSION AND CONCLUSION

Medical errors have recently begun to become chronic in our country as well as in other countries in the health care system. Even in the developed countries, medical errors are occurring and have damaging consequences to human life.

Medical errors are extremely important in terms of the results that they have for human life. A person who is exposed to a medical error may be temporarily or permanently disabled or even die. It is very important to deal with such an important problem that causes human life to be lost. Thus, medical errors should be addressed, and the underlying reasons should be analyzed especially with scientific studies.

In this study, the medical error cases ruled by the Supreme Court were examined. According to Studdert et al. (9) and Tümer (17), medical errors most commonly occur in

surgical departments and in gynecological and obstetric departments. De Vries et al. (10) concluded that surgical and treatment errors were the two most important causes of medical errors in their work. In this study, medical errors in surgical departments and in gynecological and obstetric departments were found to occupy a significant place. According to the study done on the nurses by Alemdar and Aktaş (11), diagnostic mistakes are the second most important cause of medical errors. Giraldo et al. (12) found that 25,1% of medical errors were based on diagnosis, and 22,2% were related to surgical practice in their study of court cases. In the same study, it was revealed that one-third of medical errors resulted in death. In this study, it was understood that the medical mistakes that occurred due to misdiagnosis had an important place. Besides, obstetrics and gynecology and general surgery departments were found to be the most common areas for medical errors. According to a study of Can et al. (13), among the causes of the error are a wrong treatment (47%), lack of care and attention (33%), negligence (13%) and finally diagnosis errors (7%) most common cause of the error. According to Alemdar and Aktaş's (11) study on nurses, the most common types of medical errors were hospital infections (15,4%), medical diagnostic mistakes (12,8%), drill-cutting appliance injuries and drug use problems (10,3%). According to the study conducted by Şahin and Özdemir (14) on nurses, it was determined that 67% of the nurses met with medical errors. 41,8% of the nurses and 58,2% of the physicians said they witnessed their friends' mistakes. They also stated that the most common medical error was a drug application failure. At the beginning of the causes of medical errors, it is stated that the workload is high, the number of working nurses is low, loading of tasks out of duty for nurses and fatigue. In this study, the most common medical error was the treatment error and the second most important medical error was the result of lack of care. Therefore, the studies support the findings of our study. According to the study of Ertem et al. (8) conducted on newspaper reports, it is observed that of the 65,2% physicians and of the 12,2% nurses are responsible for the medical error. The highest rate of medical errors was found in the operating room with a rate of 43,6%. It is highlighted that 19,2% of medical errors were caused by impudence, 17,4% by wrong treatment, 11,6% by carelessness, 10,5% by wrong diagnosis and 8,7% by wrong drug applications. It was understood that 38,4% of medical errors occurred in private hospitals and 49,4% of these errors were found to have resulted in death. According to the study done by Smits et al. (15) through the events reported in the emergency services, causes of medical errors originate from human (60%), organization (25%) and technical reasons (11%). In our study, it was understood that medical errors appeared in private hospitals to a great extent and doctors were the most responsible ones for medical errors. Findings related to the causes of medical errors are also parallel to the findings of our study. Leape et al. (16) stated that 19% of medical errors in hospitals were due to drug mistakes and 48% of them were due to surgical errors. Therefore, these

studies strongly support the findings obtained from our study. For the reduction of medical errors, Intepeler and Dursun (18) stated that the complex structure of health care services is effective in the emergence of medical error and the effective notification mechanism at the hospital level in the prevention of medical errors should be established. They also emphasized that hospitals capable of establishing a culture of security in organizational, social and cultural contexts can improve individual performance and suggested a model of how security cultures should be created. The model consists of reporting, analyzing and resolving errors, and finally monitoring phases of testing, implementation, and improvement.

Reason (19) argued that human error is inevitable even in the best organizations and that human errors can be reduced by improving working conditions. Naveh et al. (20) and Zohar et al. (21) stated that it is important to provide and improve patient safety, and as a way of achieving this, they proposed the establishment of patient safety culture in health care organizations. Bagnara et al. (7) suggested that hospitals are high-risk organizations. For this reason, he stated that it is important to create safety culture rather than individual performance.

Lawton and Parker (22) and Karsh et al. (25) have emphasized the importance of the reporting system in their work and have shown that physicians are reluctant to report adverse events. Mayo and Duncan (23), in their study of medical reporting, have found that nearly half of the nurses were not positive about reporting for various reasons. Beasley et al. (24) have shown in their work that physicians working in primary health care are approaching positively to reporting the medical error, and they will use the medical error reporting system in the future. Kalra (2) suggests that medical errors in the health system are attributed to the health system itself rather than to the health workers. In the complicated health system, it is stated that mistakes originating from health workers are inevitable. Akalın (4) has emphasized the importance of effective communication between healthcare professionals and managers in the prevention and reduction of medical errors in hospitals. It is an efficient strategy to ensure that employees are constantly trained, and they should take responsibility for the medical error. Conerly (26) and Avcı and Aktan (27) mentioned the importance of investigating the system instead of accusing persons of any medical errors in hospitals. Instead of creating a blame culture, they argued that a culture of safety should be created in hospitals. Ertem et al. (8) pointed out the importance of educating health workers to deal with medical errors. They pointed out that qualification in medical education should be upgraded and that branching in nursing education is very important. Understanding what are the main factors that cause medical errors and developing effective practices to overcome them is essential in ensuring patient safety (28).

Pareto Analysis of the root causes of medical errors revealed that medical treatment errors stemmed mostly

from misuse of treatment methods and surgical errors. It is thought that hospital administrations should focus more on these two issues in ensuring patient safety. It can be argued that the choice of the wrong treatment method for the reduction and prevention of medical errors and the factors affecting the emergence of surgical errors should be investigated. Although medical errors from other causes are less common, it can be said that the causes of such errors must be investigated in order to reduce these errors. In the context of the cases examined, it is thought that having most of the medical errors in private hospitals should be paid extra attention. It can be said that it is necessary to take some measures for the protection of human health in private hospitals.

As a result, it is seen that medical errors are mostly performed by physicians and occur in private hospitals. Most of the medical errors occur in the gynecology and obstetrics and general surgery branches. The most important causes of medical errors are treatment errors, diagnostic errors and lack of care. In order to reduce medical errors, it is necessary to increase the awareness level of health care workers, to provide training, to establish effective mechanisms and to take measures to reduce medical errors.

Studies conducted with medical error cases that have been ruled by Supreme Court are inadequate. Statistical analysis of medical errors are significant so that our study is thought to fill the void in the literature.

In future, studies may be carried out that present a comprehensive picture examining all cases of medical errors that have been referred to the Supreme Court, Supreme Council of Health and Forensic Medicine.

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