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Acute Poisoning in Pediatric Emergency Department: A 5-Year Analysis

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Abstract

Objective: This study aimed to delineate the etiology, clinical, and demographic characteristics of pediatric patients presenting to the emergency service with poisoning complaints and to evaluate the treatment processes retrospectively.

Methods: The cases were assessed based on age, gender, admission date and hospital stay duration, admission reason, type and quantity of the active substance, intake route, symptoms and signs, and treatment type and duration. Causes of poisoning and poisonous substance types were classified. Since the duration of our study included the periods before and after the coronavirus disease 2019 epidemic, both periods were compared.

Results: The study included 2433 pediatric poisoning cases that met the inclusion criteria. Of these, 51.3% were male and 48.7% were female. The majority (72.2%) belonging to the 1-6-year age bracket. A substantial portion of poisoning cases (83.8%) were accidental, while suicide attempts constituted 13.6%. Poisoning incidents peaked in the spring season (29.3%). Pharmaceuticals were the most common type of poisoning agents (45%), followed by corrosive-solvent substances. Alcohol-containing substances notably increased from 2.5% (n = 29) pre pandemic to 7.1% (n = 89) post pandemic. Among the 558 who had an endoscopy, 126 patients (23%) exhibited signs of gastritis, ulcer, and esophagitis. Interestingly, 73.8% of the patients were asymptomatic, and 20.3% exhibited gastrointestinal symptoms. The mean duration of an emergency department visit was 15.6 ± 9 hours, with 73% of patients being discharged from the ambulatory service. Out of all the cases, it was determined that 1 patient (0.04%) who was treated for suicide died.

Conclusion: While the majority of poisoning cases in children predominantly occur due to accidents in the 0-6 years age group and show a decreasing trend thereafter, they increase again in adolescence due to suicide-related presentations. Among all cases, pharmaceuticals are the primary cause. However, there was a noticeable increase in poisoning due to alcohol-containing substances in the post-pandemic period.

Keywords: Children, epidemiology, poisoning

Introduction

Childhood poisoning continues to be a significant public health issue globally. Every year, approximately 1 million children lose their lives as a result of injuries from various accidents. Poisoning is the leading cause of death from accidents, after traffic accidents, burns, drowning, and falls.[1-3] According to the World Health Organization (WHO), poisoning accounts for 3.9% of deaths among individuals aged 0-17. Acute poisoning alone causes more than 45 000 deaths annually among children and youth under the age of 20. Alarmingly, mortality rates in low-income countries are quadruple those in high-income countries.[3,4]

The inherent curiosity and activity of children make them particularly susceptible to these hazards. They are more responsive to poisoning agents and more likely to sustain injuries. In 2015, the American Association of Poison Control Centers (AAPCC) reported 1.3 million poison exposure cases involving children. Remarkably, children represented approximately 60% of all reported cases, with those under 5 years old constituting 46%.[5] In our country, according to the 2020 Annual Report from the National Poison Information Center (UZEM), 46.9% of the 187 528 reported poisoning cases involved individuals under the age of 19.[6]

Clearly, poison information centers worldwide receive millions of notifications annually, and thousands of children seek help from emergency services. Factors contributing to poisoning incidents and their frequency can vary based on age, gender, education level, socioeconomic status, season, and geographic location.[3,7] Understanding these demographic data, as well as the causes and risk factors, is critical in formulating effective health policies aimed at preventing and treating poisoning.

Our hospital's pediatric emergency department is frequently busy with patients admitted for poisoning incidents. In the UZEM Annual Report, our emergency department accounted for the highest number of calls related to poisoning, representing 0.78% of such calls among all hospitals nationwide in 2019.[6] Given that our pediatric emergency service is a prominent center for poisoning, the results of our research will be invaluable, adding to the sparse body of studies conducted in this field.

The objective of this study is to retrospectively elucidate the etiology, clinical, and demographic characteristics of the cases who presented with forensic poisoning complaints at the pediatric emergency service and review the treatment protocols implemented for these patients.

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Methods

This study was conducted in accordance with the principles of the Declaration of Helsinki. Cases presenting at the pediatric emergency service due to poisoning between January 1, 2017, and January 1, 2022, were retrospectively reviewed after gaining approval from the Kanuni Sultan Süleyman Training and Research Hospital ethics committee (Approval no: KAEK/2022.04.87, Date: April 7, 2022).

Inclusion criteria for our study comprised cases in which a forensic form due to poisoning was maintained, no information was missing from the files, the diagnosis code X44 (exposure to drugs, medications, and biological substances and accidental poisoning) was input into the system, and the 114 National Poison Counseling Centers were contacted with their suggestions recorded in the files. Patient data were retrieved digitally, and the files were scrutinized retrospectively. Due to the retrospective design of the study, informed consent was waived. The study followed the Strengthening the Reporting of Observational Studies in Epidemiology reporting guide for observational studies.

The cases were assessed based on age, gender, admission date and hospital stay duration, admission reason, type and quantity of the active substance, intake route, symptoms and signs, and treatment type and duration. Children were categorized into 4 age groups: 0-≤1, >1-≤6, >6-≤12, >12-≤18 years. The timing of admission was scrutinized for season, month, day (weekdays or weekends), time (midnight-08.00 AM/8.00 AM-4.00 PM/4.00 PM-midnight), and time elapsed prior to admission (0-60 minutes, >60-240 minutes, >240-720 minutes, >720 minutes). Causes of poisoning were classified as accident, substance misuse, and suicide, and the poisonous substance types were divided into pharmacological and non-pharmacological, with further categorization within these groups. Patient files were retrospectively reviewed for presenting complaints, signs and symptoms, treatment provided (gastric lavage, administration of activated charcoal, antidotes), interventions, and emergency room treatment duration. Outcomes after procedures in the emergency department were reviewed under categories such as discharge, hospitalization, referral, death, and unauthorized abandonment.

In addition, since the duration of our study includes the periods before and after the coronavirus disease 2019 (COVID-19) epidemic, the date of March 2020, when COVID-19 cases first started to be seen in Türkiye, was taken as the separation point and both periods were compared.

Statistical Analysis

Statistical data was evaluated using The Statistical Package for Social Sciences version 25.0 software (IBM Corp.; Armonk, NY, USA). Descriptive statistics were presented as mean ± standard deviation or median (minimum–maximum) for discrete and continuous numerical variables, and frequency and percentage (%) for categorical variables. Categorical variables were compared using crosstab statistics (chi-square). The confidence interval was set at 95%, and $P < .05$ was considered statistically significant.

Results

From January 1, 2017, to January 1, 2022, a total of 1 490 174 patients aged 0-18 were admitted to the pediatric emergency service. Of these patients, 5461 (0.36%) presented due to poisoning. The study included 2433 children who met the inclusion criteria.

Of the cases, 51.3% were male and 48.7% were female. The average age of all cases was 4.9 ± 5 years, ranging from 32 days to 17 years and 10 months. The average age for boys was 3.8 ± 4 years and for girls, it was 6 ± 6 years. The majority of cases, 72.2%, fell within the 1-6 year age group. When assessing the age groups by gender, only the rate of girls in the 13-18 age group (71.9%) was higher than that of boys, and this difference was statistically significant ($P = .000$) (Table 1).

Of the cases, 83.8% were due to accidental poisoning, 13.6% due to suicide attempts, and 2.6% due to other reasons such as drug use (Table 2). Upon analysis by gender, the rate of accidental poisoning was higher among boys at 91.3% (n = 1140), compared to 75.8% (n = 898) among girls. Conversely, the rate of cases due to suicide attempts was 4.7% (n = 59) for boys and notably higher at 23% (n = 273) for girls ($P = .00$).

Spring was the peak season for pediatric poisoning admissions to the emergency room (29.3%), followed closely by summer

Table 1. Distribution of Age Groups

	Age Groups, n (%)					
Gender	**0-1 Year**	**1-6 Years**	**7-12 Years**	**13-18 Years**	**Total**	***P***
Male	58 (2.4)	1003 (41.2)	59 (2.4)	128 (5.3)	1248 (51.3)	.00*
Female	46 (1.9)	755 (31)	57 (2.3)	327 (13.4)	1185 (48.7)	
Total	104 (4.3)	1758 (72.2)	116 (4.7)	455 (18.7)	2433 (100.0)	

*Chi-squared test.

Table 2. Distribution of Poisoning Causes by Age Groups

	Age Groups, n (%)				
Causes	**0-1 Year**	**1-6 Year**	**7-12 Year**	**13-18 Year**	**Total**
Accidental	104 (4.3)	1758 (72.2)	91 (3.7)	85 (3.5)	2038 (83.8)
Suicide	0 (0.0)	0 (0.0)	19 (16.4)	313 (68.8)	332 (13.6)
Other	0 (0.0)	0 (0.0)	6 (5.2)	57 (12.5)	63 (2.6)
Total	104 (4.3)	1758 (72.2)	116 (4.8)	455 (18.7)	2433 (100.0)

Table 3. Distribution of Poisoning Agents by Age Groups

	Age Groups, n (%)				
Agents	**0-1 Year**	**1-6 Years**	**7-12 Years**	**13-18 Years**	**Total**
Pharmaceutical	22 (21.2)	688 (39.1)	53 (45.7)	333 (73.2)	1096 (45.0)
Corrosive solvent	55 (52.9)	887 (50.5)	34 (29.3)	31 (6.8)	1007 (41.4)
Carbon monoxide	4 (3.8)	23 (1.3)	12 (10.3)	11 (2.4)	50 (2.1)
Insecticide–herbicide	1 (1.0)	39 (2.2)	2 (1.7)	5 (1.1)	47 (1.9)
Alcohol	9 (8.7)	65 (3.7)	6 (5.2)	38 (8.4)	118 (4.8)
Food	1 (1.0)	10 (0.6)	1 (0.9)	2 (0.4)	14 (0.6)
Unknown	0 (0.0)	2 (0.1)	0 (0.0)	5 (1.1)	7 (0.3)
Drug	0 (0.0)	1 (0.1)	5 (4.3)	27 (5.9)	33 (1.4)
Other	12 (11.5)	43 (2.4)	3 (2.6)	3 (0.7)	61 (2.5)
Total	104 (4.3)	1758 (72.3)	116 (4.8)	455 (18.7)	2433 (100.0)

(28.6%). The highest volume of visits occurred in March (11.4%) and May (10.5%), while January (5.5%) and November (5.8%) saw the fewest. Analysis revealed that 78.9% (n = 1920) of cases presented on weekdays and 21.1% (n = 513) on weekends. Most admissions (53.2%; n = 1294) took place in the evening (4:00 PM-00:00 midnight), while daytime (31.5%; n = 767) and night (15.3%; n = 372) saw fewer admissions. As for the timing of presentations after poisoning, 66.3% of the cases presented within 0-60 minutes, 25.8% within more than 60-240 minutes, 5.7% within more than 240-720 minutes, and 2.2% after more than 720 minutes (P = .00).

In terms of poisoning agents, pharmaceuticals were the most common, accounting for 45% of cases, followed by corrosive or solvent substances at 41.4% (Table 3).

When examining the types of pharmaceuticals causing poisoning, analgesic-antipyretic agents were found to be the most common pharmaceutical agent type associated with poisoning, accounting for 22.7% of cases, followed by central nervous system (CNS) acting agents at 19.9%.

When evaluating the routes of entry for the active substances into the body, it was found that the majority of poisoning, 97% (n = 2360), occurred through oral ingestion. Inhalation accounted for 2.8% (n = 69) of cases, while intravenous or intramuscular administration was observed in 0.2% (n = 4) of instances.

When assessing signs and symptoms at the time of admission, it was observed that 73.8% (n = 1796) of the patients exhibited none; among the remainder, 20.3% (n = 494) showed symptoms related to the gastrointestinal system (GIS), 2.8% (n = 67) related to the CNS, and 0.4% displayed signs of the autonomic nervous system. Moreover, cardiovascular system symptoms were present in 1% (n = 10) of the patients, while 1.8% (n = 44) showed signs related to the respiratory system.

Upon examining the treatments administered, it was found that gastric lavage was performed on 21.6% (n = 526) of the cases, activated charcoal was administered to 32.9% (n = 800), and a specific antidote was given to 2.8% (n = 69). Of the 1007 cases with corrosive substance ingestion, endoscopy was performed in 55.4% (n = 558) while 44.6% (n = 449) did not undergo the procedure. Among the 558 cases who had an endoscopy, 60 patients (10%) showed normal results, 372 (67%) displayed mild symptoms like hyperemia, and 126 (23%) exhibited signs of gastritis, ulcer, and esophagitis. Of these 126 patients, 5 (0.9%) had significant tissue damage and were subsequently monitored for potential future development of ulcers and strictures.

The average duration of a stay in the emergency department was 15.6 ± 9 hours. The length of stay varied depending on the cause of admission: accidental poisoning resulted in an average stay of 15.2 ± 9 hours, suicidal poisoning led to an average stay of 19.1 ± 11 hours, while other types of poisoning resulted in an average stay of 13.4 ± 8 hours (P = .00).

Considering the distribution of children from the emergency service (n = 2433), 73% (n = 1776) were discharged from the outpatient clinic, 21% (n = 511) were discharged by rejecting treatment, 2.8% (n = 67) were admitted to the service, 3.2% (n = 77) were hospitalized in the intensive care unit, and 0.1% (n = 2) were referred to the psychiatry clinic. Among all cases, 144 people (5.9%) were hospitalized and treated. While 101 (4.9%) of 2038 cases admitted due to accidental poisoning were hospitalized, 40 (12%) of 332 cases admitted due to suicide were hospitalized. In post-treatment follow-ups, 5 patients were monitored by gastroenterology and 2 by psychiatry, accounting for 0.3% of cases. Out of all the cases, it was determined that 1 patient (0.04%) who was admitted to the intensive care unit due to suicide died (Table 4).

In our study, we examined the children in 2 phases: before (51.7%, n = 1174) and after (48.3%, n = 1156) the COVID-19 pandemic, using March 2020 as the division point. Accidents were the primary cause of poisoning in both periods, with no significant differences observed. Upon evaluating the causative factors, pharmaceutical and corrosive substances consistently held the top 2 positions in both timelines. However, poisoning involving alcohol and its derivatives notably increased from 2.5% (n = 29) pre-pandemic to 7.1% (n = 89) post pandemic (P = .00) (Table 5). Alcohol-containing substances were categorized into 3 groups: beverages, perfumes/home fragrances, and alcohol-based disinfectants and cleaning products. Pre-pandemic, alcoholic beverages were most common (51.7%, n = 15), while disinfectants and cleaning materials were least common (2.7%, n = 8). Post pandemic, this trend changed with disinfectants and cleaning materials becoming most common (60%, n = 54) and beverages falling to second place (25.8%, n = 23) (chi-squared test, P = .00).

Table 4. Follow-Up Results After the Emergency Department According to the Reasons for Poisoning

Reason for Intake	Follow-Up Results After the Emergency Department n (%)						
	Discharge	Treatment Refusal	Pediatric Ward	Pediatric Intensive Care Unit	Psychiatry Follow-Up	Death	Total
Accidental	1491 (84.0)	446 (87.3)	60 (89.6)	41 (53.2)	0 (0.0)	0 (0.0)	2038 (83.8)
Suicide	239 (13.5	51 (10.0)	7 (10.4)	32 (41.5)	2 (100.0)	1 (100.0)	332 (13.6)
Other	46 (2.6)	14 (2.7)	0 (0.0)	3(3.9)	0 (0.0)	0 (0.0)	63 (2.6)
Total	1776 (73.0)	511(21.0)	67 (2.8)	76 (3.1)	2 (0.1)	1 (0.04)	2433 (100.0)

Table 5. Distribution of Poisoning Agents Before/After the Pandemic Period

Agents	Distribution of Poisoning Agents, n (%)		
	Pre pandemic	Post pandemic	Total
Pharmaceutical	549 (46.8)	547 (43.4)	1096 (45.0)
Corrosive solvent	492 (41.9)	515 (40.9)	1007 (41.4)
Carbon monoxide	25 (2.1)	25 (2.0)	50 (2.1)
Insecticide-herbicide	21 (1.8)	26 (2.1)	47(1.9)
Alcohol	29 (2.5)	89 (7.1)	118 (4.8)
Food	11 (0.9)	3 (0.2)	14 (0.6)
Unknown	7 (0.6)	0 (0.0)	7 (0.3)
Drug	20 (1.7)	13 (1.0)	33 (1.4)
Other	20 (1.7)	41 (3.3)	61 (2.5)
Total	1174 (51.7)	1156 (48.3)	2433 (100.0)

Discussion

In several studies conducted in our country, the rate of patients who applied to the pediatric emergency service with the complaint of poisoning was reported to be between 0.2% and 2.1%.[8-11] Studies conducted in other countries have shown that this rate varies between 0.14% and 7%.[12-14] In our study, those who applied with the complaint of poisoning constituted 0.36% of all pediatric emergency service admissions. Geographical factors, socioeconomic status, cultural differences, accessibility of education, and health services affect these rates.

In the 2020 report of UZEM, it is stated that the 0-19 age group constitutes 46.9% of all poisoning, and the children under 5 constitute 56.3% of all children.[6] In the data of AAPCC, the rate reported for the 0-5 age group is 46%.[5] This rate of 0-5 age group among poisoning cases varies between 49.1% and 81.3% in the studies conducted in our country and abroad.[8,10-12,15] In line with the literature, in our study, the majority of the cases (76.5%) were in the 0-6 age group. Although the mobility of young children gradually increases and their access to poisoning agents becomes easier, the later development of their awareness of the danger makes this age group more risky in terms of accidental poisoning. Similar to other studies, the second age group in which poisoning was more common was the 13-18 age group (18.7%).[8,10,16] According to WHO, fatal poisoning, which peaks in the 1-year age group and then tends to decrease, increases again in the adolescence age group.[3] The increase in suicide cases or addictive substance use triggered by children's social environment, desire to prove themselves and their desire to make independent decisions during adolescence.

When the cases were evaluated according to gender, 51.3% were male and 48.7% were female. In most of the studies, the number of males is higher in cases of poisoning, but when the age groups are examined, the number of females is higher in adolescence.[8,10-12,16-18] In our study, the rate of boys in 0-1, 1-6, and 7-12 age groups and the rate of girls (71.9%) in the 13-18 age group were higher.

When the causes of poisoning were evaluated, it was determined that 83.8% of children were poisoned by accident, 13.6% for suicide purposes, and 2.6% for other reasons. While emergency service admissions due to suicide were higher in adolescence, cases due to accidents were higher in younger age groups. When the genders were evaluated, the rate of application due to accident was 91.3% for boys, while as for girls, 75.8% were for accident and 23% for suicide. Similar findings are also reported in other studies.[8,10,17,19,20] In UZEM 2020 report, the highest number of accidental poisoning (96%) occurred in the 0-5 age group.[7] The fact that children in this age group are active and open to discovery increases the incidence of accident-related admissions, while stress in adolescence, especially in girls, anxiety triggered by family and social environment plays a role in the increase in the frequency of suicidal poisoning.

Similarly, in studies conducted in our country, in UZEM data, and in studies conducted in other countries, the most common season of the year for poisoning applications to the emergency departments is reported to be spring.[7,10,12,21] Consistent with these data, the season with the highest number of poisoning applications in our study was spring, followed by summer. The most frequently applied months were March and May, respectively. The increase in diseases due to viral infections and drug consumption in the spring, the increase in free time spent at home as a result of the closure of schools and kindergartens in the summer, the increase in children''s access, and exposure to corrosive substances during spring cleaning cause poisoning agents to be encountered more frequently. When the admission time was evaluated, the cases (53%) applied most frequently in the evening (04.00 PM-24.00). Although there is limited research on admission time of poisoning cases, few studies have evaluated admission time, and the findings were similar to our study.[1,9,12] Excessive free time caused by closure of schools, kindergartens, and nursing homes and the daytime work hours of the parents of the poisoned children cases may have contributed to the late application time and delayed admissions to emergency services in the study.

It was also determined that 97% of the patients were poisoned by the oral route, 2.8% by inhalation, and 0.2% intravenously/intramuscularly. Consistent with the published literature, it was found that most of the poisoning were by the oral route.[1,10-12,22] In

UZEM 2020 Annual Report, it was observed that poisoning was most common in the 0-5 age group by oral intake (93%).[7]

In this current study, pharmaceuticals were found to be in the first place (45%) among all cases, while corrosive-solvent-corrosi ve substances were in the second place (41.4%). Studies conducted in developed countries have shown that the most common poisoning agent was pharmaceuticals, while in studies conducted in developing countries, non-pharmaceutical substances were shown as the most common agents. Different geographical and cultural structures, as well as economic conditions, and the variability of access to drugs may have caused this difference.[3,12,20] In studies conducted in our country, drugs have been shown to be the most common factor. Similarly, in the UZEM 2020 report, drugs (53.7%) are shown as the most common factor in poisoning in the 0-5 age group.[7,8,10,19] Additionally, the reasons for the high rate of corrosive substance poisoning found in our study were that they were kept in easily accessible places without adequate security measures, and that such cases were primarily referred to our hospital because it had the only pediatric endoscopy unit in the region between the dates of the study.

In our study, it was observed that analgesic-antipyretic agents were the most common (22.7%) and central nervous system medications were the second most common agent in pharmaceutical-related poisoning cases. In studies conducted in our country and in the world, it has shown that analgesic-antipyretic agents are the most common pharmaceutical.[3,8,13,19,23,24] More frequent and unconscious use of analgesic-antipyretic medications, easy accessibility, and good taste lead to more poisoning cases.

Studies show that more than half of the cases apply to the hospital within the first few hours after poisoning.[9,11,12,19] In our study, it was found that 66.3% of the cases applied within 0-60 minutes. The fact that our hospital is a large and well-known hospital as well as being easily accessible may have resulted in quick application times.

It was determined that 73.8% of the poisoning cases did not have signs and symptoms at the time of admission, 20.3% had GIS, 2.8% had CNS, 0.4% had autonomic nervous system, 1.8% had respiratory, and 0.9% had cardiovascular system signs and symptoms. In other studies, it is seen that 30 to 80% of the cases are asymptomatic at the time of admission, and GIS and CNS signs and symptoms are more common in symptomatic patie nts.[10,12,16,17,22,25-28] The fact that the active substance is taken in small amounts and the admission to our hospital is usually made within the first 1-2 hours may have caused the high rate of asymptomatic cases. Also, all pharmaceuticals are taken in toxic doses trigger nausea and vomiting, and that patients with a history of corrosive substance intake were more likely to apply to our hospital explain the frequency of GIS symptoms.

Gastric lavage was performed in 21.6% of the cases in the emergency department, activated charcoal was given to 32.8%, and antidote treatment was given to 2.8%. In studies conducted both in our country and abroad, it is observed that the methods used in emergency treatments are the same, but there is a difference in the percentage of application uses.[1,8,10,16,21] This difference may have been caused by the time of admission of the poisoning cases, the fact that the routine application of gastric lavage is debatable, the limited time required for treatment effectiveness, the clinician deciding on the treatment by considering the complications, and the facilities of the hospitals.

The mean duration of stay in the emergency department was found to be 15.6 hours. Reported in the published literature, the duration of stay in emergency care is reported to be between 5.5 and 24 hours.[9,12,27] Investigating the distribution of discharge from the emergency room, 73% were discharged from the outpatient clinic, 21% were discharged by rejecting the treatment, 2.8% were hospitalized in the ward, 3.2% were admitted to the intensive care unit, and 0.1% were referred to the psychiatry clinic. The rate of those who were discharged without hospitalization was 82% in the study of Biçer et al,[8] 73.5% in the study of Binay et al.,[10] and 57.6% in the study of Kendirci et al.[17] The rate of cases hospitalized in the intensive care unit varies between 0.4% and 5%.[1,8,12,17,27] The length of stay of the patients in the emergency room and the hospitalization rates are affected by many factors such as hospital facilities, occupancy rate of the service and intensive care units, the number of patients, and the reason of poisoning cases admitted.

Age, time of application, type and amount of the causative agent, development level of countries, and quality of health services are the most important factors affecting mortality rates in poisoning. While this rate is 0.4%-1% in developed countries, it can reach 5.7% in developing countries.[12,16] In some studies conducted in our country, no deaths were reported, while other studies report rates ranging from 0.6% to 1.3%.[8,9,16,29,30] In our study, 1 case (0.04%) brought in due to drug poisoning died, and 7 patients (0.3%) were taken into long-term follow-up due to gastroenterological and psychiatric problems. It can be concluded that, as a result of the increased quality and accessibility of healthcare services, a declining trend in mortality rates is observed compared to studies conducted in previous years.

Although the frequency of hospital admissions did not significantly differ between the pre-pandemic and post-pandemic periods, a notable increase in poisoning due to alcohol-containing substances was evident in our findings. Before the pandemic, alcohol-containing beverages predominated, but post pandemic, there was a significant rise in poisoning from alcohol-based disinfectants and cleaners. While some studies report an increase in emergency room admissions for poisoning during the pandemic, others find no change. Factors such as the pandemic's duration, quarantine measures, and regional variations in access to healthcare may account for these discrepancies. However, as consistent with our study, many reports indicate a significant rise in cases of poisoning related to alcohol and alcohol-based disinfectants during the pandemic.[31-35]

Conclusion

In conclusion, while the majority of poisoning cases in children predominantly occur due to accidents in the 0-6 age group and show a decreasing trend thereafter, they increase again in adolescence due to suicide-related presentations. Among all cases, pharmaceuticals are the primary cause, followed by corrosive–dissolving–abrasive substances. However, there was a noticeable increase in poisoning due to alcohol-containing substances in the post-pandemic period. Even though many poisoning cases might not exhibit findings and symptoms at the time of presentation, it should not be forgotten that symptoms can emerge within hours or days and poisoning can result in long-term illness or death. Although the low mortality rate is promising, the fact that most poisoning occurs due to preventable causes shows that we need to focus more on prevention strategies.

Availability of Data and Materials: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: Ethics committee approval was obtained for this study from the ethics committee of Kanuni Sultan Süleyman Training and Research Hospital (Approval no: KAEK/2022.04.87, Date: April 7, 2022).

Informed Consent: Due to the retrospective design of the study, informed consent was waived.

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