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ORIGINAL ARTICLE
ORİJİNAL ARAŞTIRMA

Evaluation of Acute Intoxication Cases in Pediatric Intensive Care Unit

Çocuk Yoğun Bakım Ünitesinde Akut Zehirlenme Olgularının Değerlendirilmesi

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ABSTRACT

Aim: Poisonings represent a significant number of preventable admissions to the pediatric intensive care unit (PICU). The aim of this study is to evaluate poisoning cases treated in PICU.

Material and Method: Cases with a diagnosis code of poisoning followed in the PICU between January 2020 and April 2022 were examined retrospectively.

Results: A total of 133 patients were included to the study. This constituted 6.2% of the number of patients in the PICU. The median age of the patients is 14.21±6.14 [Interquartile range (IQR) 0-17 years]. The majority of patients (62.4%) were between the ages of 12-18. 82 (61.7%) patients were female. The median PRISM III score and GCS were 2.86±1.46 (IQR: 0.8-42) and 15±1.51 (IQR: 6-15- mean 14.21), respectively. The most common cause was suicide (52.6%), oral-drug-intake was the most common (91.7%) type, and 57 (42.9%) patients had multiple substance intakes. 47 (35.3%) patients received central nervous system (CNS) drugs, 14 (10.5%) cardiological medications, and 30 (22.5%) patients received anti-inflammatory/antipyretic medications. 24 (18%) patients took non-drug-related substances. The most common symptoms were altered mental status (AMS) (27.8%) and vomiting (21.8%). Gastric lavage was performed in 115 (85.7%), and an antidote was administered in 31 (21.3%) patients. The length of stay in the PICU and in hospital were 2±1.35 (IQR: 1-12), and 2±1.62 (range 1-14) days, respectively. 2 patients (1.5%) died in the study.

Conclusion: Poisoning is still one of the leading causes of childhood mortality. Physicians should be careful with children who are admitted with vomiting and AMS. Further studies with larger samples are required to demonstrate the experiences regarding poisoning since treatments must be initiated in a holistic manner.

Keywords: Poisoning, suicide, child, drug, pediatric intensive care unit

ÖZ

Amaç: Zehirlenmeler, pediatrik yoğun bakım ünitesine (ÇYBÜ) önlenebilir yatışların önemli bir kısmını oluşturmaktadır. Bu çalışmanın amacı ÇYBÜ'de tedavi gören zehirlenme vakalarını değerlendirmektir.

Gereç ve Yöntem: Ocak 2020 - Nisan 2022 tarihleri arasında ÇYB'de takip edilen zehirlenme tanı kodlu vakalar elektronik tıbbi kayıtlar kullanılarak retrospektif olarak incelendi.

Bulgular: Çalışmaya 133 hasta alındı. Bu PICU'da yatan hasta sayısının %6.2 sini oluşturmaktaydı. Hastaların yaş ortancası 14.21±6.14 (aralık 0-17 yaş) idi. Hastaların çoğunluğunu (%62.4) 12-18 yaş aralığındaki hastalara oluşturmaktaydı. Hastaların 82'si (%61,7) kız cinsiyetteydi. Medyan PRISM III skoru ve GKS sırasıyla 2,86±1,46 (aralık 0,8-42) ve 15±1,51 (aralık 6-15- ortalama 14,21) idi. Zehirlenmelerin en sık nedeni özkıyım (%52,6) olup, en sık görülen zehirlenme türü (%91,7) ağızdan ilaç alımıydı ve 57 (%42,9) hastada birden fazla madde alımı vardı. 47 (%35,3) hasta merkezi sinir sistemini (MSS) etkileyen ilaç, 14 (%10.5) hasta kardiyolojik ilaç, 30 (%22.5) hasta antiinflamatuvar/antipiretik ilaç aldı. 24 (%18) hasta ilaç dışı madde aldı. 47 (%35,3) hasta merkezi sinir sistemini (MSS) etkileyen ilaç, 14 (%10.5) hasta kardiyolojik ilaç, 30 (%22.5) hasta antiinflamatuvar/antipiretik ilaç aldı. 24 (%18) hasta ilaç dışı madde aldı. En sık semptom bilinç kaybı (%27.8) ve kusmaydı (%21.8). 115 (%85.7) hastaya gastrik lavaj yapıldı, 31 (%21.3) hastaya antidot uygulandı. ÇYB' de kalış süresi 2±1.35 (aralık 1-12), hastanede kalış süresi 2±1.62 (aralık 1-14) gündü. Çalışmada 2 hasta (%1.5) kaybedildi.

Sonuç: Zehirlenme hala çocukluk çağı ölümlerinin önde gelen nedenlerinden biridir. Kusma ve AMS ile başvuran çocuklara dikkat edilmesi gerekmektedir. Zehirlenmelerle ilgili deneyimlerin ortaya konabilmesi için daha geniş örneklemli çalışmalara ihtiyaç vardır.

Anahtar Kelimeler: Zehirlenme, özkıyım, çocuk, ilaç, çocuk yoğun bakım ünitesi

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INTRODUCTION

Pediatric poisoning is a common public health problem that occurs when substances are swallowed, inhaled, injected, or absorbed through skin contact in harmful quantities to the body (1-3). The majority of poisoning cases occur in pediatric patients (4). Although the frequency of poisoning has decreased, especially with the studies initiated to prevent home accidents (use of locked doors, education of parents and caregivers, etc.), it still maintains its place at the forefront among the reasons for both admission to the emergency room and admission to intensive care.

Decontamination, enhanced elimination, antidotes, and supportive care are commonly used to manage poisoning cases (5). The prevalence and incidence of pediatric poisoning can vary by region, with higher rates often observed in low- and middle-income countries due to factors like inadequate storage of hazardous substances, lack of childproof packaging, and limited awareness about poison prevention. Children under the age of 5 are at the highest risk for accidental poisoning due to their natural curiosity, exploratory behavior, and lack of awareness about the dangers of ingesting harmful substances. Pediatric poisoning can have serious health consequences, ranging from mild symptoms to severe illness or even death, depending on the substance ingested and the amount. Poisoning incidents can result in short-term health issues, long-term disabilities, developmental delays, and mental health impacts on both the child and their family

Morbidity and mortality are significantly reduced with early and appropriate intervention. For this reason, it is life-saving for physicians to have information such as which treatment is priority in which poisonings and whether there is an antidote. Although not all patients require intensive care management, patients admitted to the pediatric intensive care unit (PICU) may be followed by severe cases of poisoning that may progress to extracorporeal treatments and even organ transplantation. This study was planned to evaluate the pediatric cases hospitalized in the PICU for poisoning, to evaluate the causes of poisoning, clinical signs and symptoms, and clinical course.

MATERIAL AND METHOD

Patients admitted to PICU due to poisoning between January 2020 and April 2022 were included in the study. Data were obtained retrospectively from the patient's medical files. The PICU is located with a 30-bed tertiary care hospital. The inclusion criteria for the study included individuals aged between 1 month and 18 years, confirmed intake of a toxic substance or a lethal dose drug, admission to the PICU due to poisoning from the specified toxic substance or drug, and the presence of signs or symptoms indicating moderate to severe poisoning. The exclusion criteria for the study were individuals over 18 years of age, those with a history of unproven or questionable substance intake, individuals with mild intoxication, and those with missing data in their files. Patients who did not fit this age group and had missing data in their files were excluded from the study. Only patients followed by the poisoning diagnosis code were included in the study. Patients who were followed up with intoxication after toxic doses of opioids and narcotics could not be included in the study due to different diagnostic codes. Initial evaluations of the patients were made in the pediatric emergency department, and patients who were thought to need intensive care were admitted to the PICU in consultation with the pediatric intensivist. Some of the patients were accepted by referral from other hospitals. They were admitted to the PICU without being monitored in the emergency department. PICU admission indications of patients were defined as; altered mental status (AMS) or Glasgow coma scale (GCS) <13-14, cardiac dysfunction, any organ failure, hemodynamic instability, lethal dose of substance/drug intake, and exposure to drugs or substances known to be lethal.

In the study, the drugs were grouped as the drugs affecting the central nervous system (CNS), cardiological drugs, anti-inflammatory (NSAIDs) - antipyretic drugs, and other non-drug-related poisonings. Multiple drug intake was defined as drug intake in more than one variety and different groups. Since the number of patients with polypharmacy poisoning (>5 medications) was low, it was not considered as a separate group in the study. Known ingested amounts were noted in the study. For some drugs (acetaminophen, levatiracetam, valproic acid, iron), measured baseline drug levels were sent. Non-drug-related poisoning includes poisonings with corrosive substances, foods, organophosphate, alcohol, carbon monoxide, and lighter fluids. Demographics, vital signs, Glasgow coma scale (GCS), pediatric risk of mortality score-III (PRISM III), drugs that cause poisoning, non-drug substance exposure, symptoms, need for intubation, duration of mechanical ventilation, extracorporeal treatments (dialysis, plasmapheresis, hemadsorption), length in PICU and hospital were recorded. The distribution of poisonings by age and the relationships between drug groups, symptoms, and length of stay in pediatric intensive care and hospital were compared.

Statistical Analyses

Data analyses were performed by using SPSS for Windows, version 22.0 (SPSS Inc., Chicago, IL, United States). Whether the distribution of continuous variables was normal or not was determined by the Kolmogorov-Smirnov test. Levene test was used for the evaluation of the homogeneity of variances. Unless specified otherwise, continuous data were described as median (min-max). Categorical

data were described as a number of cases (%). Statistical analysis differences in not normally distributed variables between two independent groups were compared by Mann Whitney U test. Categorical variables were compared using Pearson's chi-square test or Fisher's exact test was accepted p-value <0.05 as a significant level on all statistical analysis.

RESULTS

A total of 133 patients were included in the study. In 2.5 years, 2426 poisoning cases were admitted to the emergency department, 142 (5.8%) patients had PICU hospitalization indication, and nine patients did not accept admission to the PICU. Between these dates, a total of 2120 patients were followed in the PICU, and poisoning cases constituted 6.2% of the patients.

Of the 133 patients, 82 (61.7%) patients were female; 51 of them (38.3%) were male. The median age of the patients was 14.21±6.14 [Interquartile range (IQR) 0-17 years]. The median PRISM III score and GCS were 2.86±1.46 (IQR: 0.8-42) and 15±1.51 (IQR: 6-15- mean 14.21), respectively. The most common cause of poisoning was suicide (52.6%), and the second most common was accidental drug intake (40.6%). Suicide and accidental drug taking were most common between the ages of 12-18. Oral drug intake was the most common (91.7%) type of poisoning in the study and, there was one patient (0.8%) who was poisoned by skin absorption. Demographic data and poisoning characteristics of the patients are given in **Table 1**. In the study, 22 patients (16.5%) were accepted by referral from other hospitals. The time between the patient's admission to the emergency department and their admission to the PICU was 2±1.32 (IQ range: 1-9) hours.

In the study 57 (42.9%) patients had multiple substances intakes. While 47 (35.3%) of the patients received drugs that affected the CNS only, 12 (9%) patients were in the multi-drug group and received CNS drugs. The most common of these was antipsychotics (38.1%), and the second most common was selective serotonin reuptake inhibitors (SSRIs) (30.9%). 30 patients (22.5%) received anti-inflammatory / antipyretics and 14 patients (10.5%) received cardiological drugs. In the study, it was observed that patients (n=33) who took other types of drugs (antibiotic, muscle relaxant, spasmolytic and antiemetic, and gastric protective) other than these groups, generally took multiple types of drugs. Twenty-four (18%) patients were poisoned with non-drug-related substances. Detailed evaluation of the patients according to the drugs and substances they take is given in **Table 2**. In the study, the amount of medication taken by all patients except 2 patients was at a toxic dose. In the patient group between 2-5 years of age, poisoning with non-drug-related substances was most common. Poisoning with CNS drugs was most common between the ages of 12 and 18.

Table 1: Demographic data and poisoning characteristics of the patients

	N (%)
Gender	
Female	82 (61.7)
Male	51 (38.3)
Age (y/o)	
0-2 y/o	10 (7.5)
2-5 y/o	30 (22.6)
5-12 y/o	10 (7.5)
12-18 y/o	83 (62.4)
Cause of Poisoning	
İntentional / Suicide	70 (52.6)
Unintentional / Accidental drug taking	54 (40.6)
Wrong administration of treatment	3 (2.3)
Other	6 (4.41)
Way to encounter poison	
Oral	122 (91.7)
Inhalation	10 (7.5)
Skin absorption	1 (0.8)
Single substance ingested	76 (57.1)
Multiple types of substances ingested	57 (42.9)
2 types	21 (15.7)
3 types	16 (12)
4 types	18 (13.5)
5 types	2 (1.5)
Non-drug-related poisoning	24 (18)
Amount ingested known	103 (77)
İnital drug levels measured	18 (13.5)

(y/o= years old)

Table 2: Distribution of drugs and substances that cause poisoning

	N (%)
Central Nervous System Drug İntake	55 (41.3)
Antipsychotics	21 (15.7)
Selective serotonin reuptake inhibitors (SSRIs)	17 (12.7)
Serotonin-norepinephrine reuptake inhibitors (SNRIs)	7 (5.2)
Tricyclic antidepressant	5 (3.7)
Valproic acid	2 (1.5)
Clonazepam	1 (0.7)
Carbamazepine	1 (0.7)
Levetiracetam	1 (0.7)
Anti-inflammatory/antipyretic drugs	30 (22.5)
Paracetamol	15 (11.2)
Non-steroidal anti-inflammatory drug	12 (9)
Aspirin	2 (1.5)
Other	1 (0.7)
Cardiological drugs	14 (10.5)
Beta Blocker	6 (4.5)
Calcium channel blocker	4 (3)
Angiotensin-converting enzyme (ACE) inhibitors	3 (2.3)
Other drugs	31 (23.3)
Gastrointestinal medications/antiemetics	6 (4.5)
Antibiotics	5 (3.7)
Antidiabetic	5 (3.7)
Hormone and hormone antagonists	5 (3.7)
Antihistamines	4 (3)
Muscle relaxant/spasmolytic	4 (3)
Colchicine	2 (1.5)
Iron	2 (1.5)
Muscle relaxant/spasmolytic	2 (1.5)
Non-drug-related poisonings	24 (18)
Organophosphate (inhalation /absorption from skin)	5 (3.7)
Rat poison	4 (3)
Corrosive substance	4 (3)
Non-corrosive household cleaning products	3 (2.3)
Alcohol	3 (2.3)
Carbon monoxide	3 (2.3)
Lighter fluid	2 (2.3)

(In this table, patients taking multiple drugs, especially in the CNS drug group, have also been included. Therefore, the total number of patients appears to be higher than the 133 patients in our study.)

In the study, the most common symptom was AMS (27.8%), the majority of the patients (89.4%) were patients with GCS between 12-15, and the most common ECG finding was bradycardia (10.5). The distribution of the patients according to the most common symptoms and findings is given in **Table 3**. In the study, patient groups receiving only CNS drugs (n = 47), cardiogenic drugs (n = 14), and non-drug-related substances (n = 24) were compared according to age, GCS, length of stay in PICU and hospital, and symptoms and findings. There was a statistically significant difference between the groups in terms of age, vomiting, and AMS ($p<0.05$). Vomiting was more common in people using non-drug-related substances, and impaired consciousness is more common in people using CNS drugs (**Table 4**).

Gastric lavage was performed in 100 (75.2%) patients and activated charcoal was given in 115 (85.7%) patients. In cases where there was an indication, gastric lavage was generally performed within the first 2 hours, but there were 3 patients in which it took up to 4 hours after the injection. Antidote was given to 31 patients (21.3%). Inotrope infusion was given to 6 patients, the maximum vasoactive inotrope score (VIS) was 220. Four patients required dialysis to remove toxins from the circulation, one patient received intermittent dialysis (3 sessions), and 3 patients received continuous renal replacement (CRRT) treatment. The mean number of days of CRRT was 5 (1-5) days. A patient poisoned with a degreaser recovered by hemadsorption. Four patients (%3) with respiratory failure were intubated, and the others received non-invasive ventilation support. The median values of patients' PICU stay and hospital stay were 2±1.35 (IQR:1-12) and 2±1.62 (IQR:1-14) days, respectively. In the study, only two patients (%1.5) patients who inhaled lighter fluid died within the first 18 hours due to fatal arrhythmia and cardiogenic shock.

Table 3: Distribution of patients' symptoms and signs, Glasgow coma scale and electrocardiogram findings

	N (%)
AMS / Unconsciousness	37 (27.8)
Vomiting	29 (21.8)
Hypotension	7 (5.2)
Fire	5 (3.7)
Convulsion	3 (2.3)
Hypersalivation	12 (9)
Respiratory Failure	6 (4.5)
Cardiogenic shock	4 (3)
Anaphylactic shock	1 (0.7)
Skin rash	6 (4.5)
GCS	
<8	6 (4.5)
9-11	8 (6)
12-15	119 (89.4)
Metabolic acidosis	4 (3)
Lactic acidosis	4 (3)
ECG finding	
Bradycardia	14 (10.5)
Tachycardia	12 (9)
Atrioventricular (AV) block	4 (3)
Arrhythmia	3(2.3)
Asystole	2 (1.5)

AMS: altered mental status, GCS: Glaskow coma skale, EKG: Electrocardiogram

Table 4: Comparison of patient groups receiving only CNS drugs, cardiogenic drugs, and non-drug-related substances

		CNS drugs (n:47)	Cardiological drugs (n:14)	Non-drug related substances (n:24)	p
GCS, Med (Min-max)		15(9-15)	15(15-15)	15(6-15)	0,053 Φ
LCOS in PICU, Med (Min-max)		2(1-5)	1(1-3)	2(1-12)	0,067 Φ
LCOS in hospital, Med (Min-max)		2(1-5)	2(1-3)	3(1-14)	0,131 Φ
Age, n(%)	0-2 y/o	-	2(14,3%)	3(12,5%)	0,012*
	2-5 y/o	7(14,9%)	4(28,6%)	8(33,3%)	
	5-12 y/o	4(8,5%)	-	3(12,5%)	
	12-18 y/o	36(76,6%)	8(57,1%)	10(41,7%)	
Vomiting, n(%)	+	8(17,0%)	1(7,1%)	10(41,7%)	0,030*
	-	39(83,0%)	13(92,9%)	14(58,3%)	
AMH, n(%)	+	17(36,2%)	-	8(33,3%)	0,020*
	-	30(63,8%)	14(100,0%)	16(66,7%)	
Respiratory Failure (%)	+	-	-	2(8,3%)	0,103*
	-	47(100,0%)	14(100,0%)	22(91,7%)	
Metabolic Acidosis (%)	+	1(2,1%)	-	1(4,2%)	0,999*
	-	46(97,9%)	14(100,0%)	23(95,8%)	
Convulsion, n(%)	+	2(4,3%)	-	1(4,2%)	0,999*
	-	45(95,7%)	14(100,0%)	23(95,8%)	
Hypotension, n(%)	+	-	1(7,1%)	2(8,3%)	0,085*
	-	47(100,0%)	13(92,9%)	22(91,7%)	
Arrhythmia, n(%)	+	1(2,1%)	-	3(12,5%)	0,092*
	-	46(97,9%)	14(100,0%)	21(87,5%)	
ECG finding, n(%)	Bradycardia	-	-	1(33,3%)	0,999*
	Tachycardia	1(100,0%)	-	2(66,7%)	
	AV block	-	-	-	
	Other	-	-	-	
Discharge, n(%)	Healthy	47(100,0%)	13(100,0%)	23(95,8%)	0,999*
	Exitus	-	-	2 (8.6 %)	

Continuous variables are expressed as median (min-max) and categorical variables are expressed as either frequency (percentage). Mann Whitney u Test Φ, Chi square Test* AMH: altered Mental Status, AV: atrioventricular, CNS: central nervous system, ECG: electrocardiogram, GCS: Glasgow coma scale, LCOS: length of stay, Med: median, PICU: pediatric intensive care, y/o: year old

DISCUSSION

Poisoning is one of the leading causes of childhood morbidity and mortality worldwide. Despite advances in the detection of poison by modern research methods, clinical skill in recognizing poisonings through a detailed history, detailed physical examination, and combining findings from the results of basic investigations are essential for the treatment of children with suspected poisoning (6). Since more advanced treatment is required in the PICU, clinicians need to be much more experienced. In this study, patients admitted to the PICU of our 30-bed tertiary care hospital due to poisoning were evaluated. Poisonings (unintentional and intentional) represent a significant number of preventable admissions to the PICU, but data about poisonings requiring PICU-level care are limited (7, 8). Publications about critically ill children's poisoning are generally in the form of case reports or case series to share information and experiences regarding advanced treatments. There are a few studies in our country that evaluate poisonings in PICUs in a holistic manner (9-13).

In our study, poisoning cases constituted 6.2% of the total patients who were admitted to the PICU during the 2.5 years. Our study is similar to previous studies in this respect (7,10,11). In 2014, Even et al. 's study reported that poisonings represented 8.0% of all PICU admissions in a 5-year period, which was twice the rate in studies conducted in previous years (7). It has been reported that intensive care admissions have increased over the years. In our study, our rate was similar to this study and other studies conducted in our country (10,11).

In previous studies, it was stated that the number of cases of poisoning for suicidal purposes was higher in the older age group, while accidental poisonings were more common in children aged 2-3 years (10). Parallel to this information, in a 5-year retrospective study involving 1030 patients in Italy, the majority of the patients were patients who accidentally took medication without intentionality (14). In another study, it was reported that most poisonings occurred in young children at home, when a single substance was unintentionally ingested between 18:00 and 24:00, and cases of intentional poisoning were most frequently seen in female adolescents (15). In our study, the majority of patients consisted of the suicide group, and this rate was found to be higher in girls and adolescents. This was because the majority of our patients were over the age of 12. Additionally, in our study, we did not examine the time when the patients arrived at the emergency department, which is a shortcoming of ours.

Childhood poisoning often occurs under the age 5 (16). In our study, a notable deviation from typical trends was observed, with a majority of patients aged 12-18, contrary to the literature (9-13). Traditionally, poisonings are more common in young males under 5 and older females over 12 (7,8,10-13). However, our study, focused on older age groups, showed a higher proportion of female patients.

In our study, 57.1% of cases involved a single substance, with multi-substance ingestion increasing with age. Accidental poisonings appeared more in the 0-3 age group, while suicidal cases were more prevalent in older ages (17, 18). Contrary to expectations, our study showed a high rate of single-drug ingestions even in suicide cases. A Saudi Arabian systematic review revealed accidental ingestion as a common cause of poisoning in children, mainly from drugs and pesticides at home (19). In our study, accidental drug ingestion ranked second, emphasizing caregiver awareness and attentiveness as critical factors (19, 20).

Prediction of prognosis in patients with acute poisoning has clinical significance, it helps in timely and appropriate treatment. Routine clinical scoring systems used in intensive care are used to predict mortality in acute poisoning cases. We also used GCS and PRISM III scoring systems in our study. Poisoning mortality score (PMS) is a newly developed score on this subject. Although this score is not widely used, PMS has shown a good performance in predicting in-hospital mortality in studies, this score has been reported to be objective and applicable at an early stage of poisoning (21). A score that will contribute to the clinical decision-making process is needed, especially in the management of acutely poisoned patients who need PICU. We did not use this score in our study, but as a result of studies with a high level of evidence, such a score can be used in poisoning cases in the future.

Internationally, analgesics and central nervous system drugs are frequently reported as primary poisoning agents (22-24). Similarly, studies in our country show that analgesic-antipyretics and CNS drugs are common culprits (10-13). Our study diverged by comparing CNS drugs, cardiological drugs, and non-drug substances. Variances in age, vomiting, and AMS were evident among these groups, but other data showed no significant differences. In poisoning cases, unintentional intake is more common at younger ages, typically involving household cleaning products and sometimes medications administered by non-parental caregivers. A local study highlighted pesticide, insecticide, and snake bites as prevalent in non-drug-related poisonings (12). While we excluded snake and scorpion stings, our study found organophosphate poisoning from insecticides and pesticides as the primary concern in this group, followed by rat poison and corrosive substances.

Studies show that the average LOS in PICU in poisoning cases varies between 1.2 and 2 days. In our study, the median duration was 2±1.35 (IQR: 1-12). This result is

similar to the literature. When the literature is reviewed, it is seen that the mortality rate due to poisoning in our country is below 6%. In our study, the mortality rate was found to be 1.5%. In cases of life-threatening poisoning, the use of extracorporeal treatments to remove toxins from the blood constitutes life-saving treatment methods (25). In this study, we applied CRRT to four patients and applied both CRRT and hemadsorption to one patient. Although we have a small number of patients to say this, we prefer extracorporeal treatments early.

This study has limitations because it is a single center and its a retrospective design. Since patients were recruited according to diagnosis codes in the medical data system, opioid poisoning, and animal bites were not included in the study. We think that this is another limitation of the study.

CONCLUSION

Childhood poisoning is a major cause of ER visits and hospitalizations, presenting a preventable risk of morbidity and mortality. Understanding poisoning epidemiology is crucial for prompt and accurate treatment. Physicians should exercise caution with vomiting and altered mental status in admitted children. Larger studies are needed to guide holistic, timely treatment approaches. Our unique study focused on adolescents unlike most, revealed higher rates of suicide attempts, high-dose drug ingestion, and multiple drug use. Despite varied ages and causes, our PICU length of stay and mortality rates align with existing literature.

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ETHICAL DECLARATIONS

Ethics Committee Approval: The study protocols were approved Toros University Scientific Research and Publication Ethics Committee ((Date: 29.05.2022, Decision No: 66).

Informed Consent: Because the study was designed retrospectively, no written informed consent form was obtained from patients.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

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Author Contributions: 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.

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