

# EVALUATION OF MANAGEMENT OF ACUTE OPIATES TOXICITY IN PATIENTS ADMITTED TO NATIONAL ENVIRONMENTAL AND CLINICAL TOXICOLOGY AND RESEARCH CENTER: A PROSPECTIVE STUDY

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Submit Date 2022-03-27

Revise Date 2022-11-07

Accept Date 2022-11-30

## ABSTRACT

**Background:** Opioids are fundamental agents for managing pain. However, they are always linked to significant hazards to patients and society, such as misuse, abuse, addiction, diversion, and overdose deaths. **Aim of Work:** This study aims to improve the outcome of patients admitted with acute opiate toxicity and recognize the magnitude of the problem on a statistical basis. **The objective of the study:** is to evaluate the management, sociodemographic factors and substance abuse among patients admitted with acute opiate toxicity to National Environmental and Clinical Toxicology and Research Center (NECTR) Cairo University. **Subjects and Methods:** This prospective cohort study included 98 cases admitted to NECTR from October 2020 to March 2021. They were classified into 3 age groups; (less than 20 years), (20-40 years) and (more than 40 years). Data were analyzed for sociodemographic data of the patients, substance of abuse, manner of intake, history of addiction, clinical presentation, management and outcome. **Results:** The most common age group was those between 20-40 years (67.3%), followed by those above 40 years (22.4%), with male dominance (82.7%). The most common substance of abuse was opiates 63.3% (62 patients). The most common manner of overdose was accidental (95.9%) and the mortality rate was (11.7%). **Conclusions:** Males were more common than females. The most common substance of abuse was opiates.

**KEYWORDS:** Study, Acute poisoning, opiates, NECTR

## INTRODUCTION

Opioids are the most used classes of analgesic medications, most effective in managing acute, severe and cancer pain. This is due to their mechanisms of action, the receptor's location and the key role endogenous opioids role in pain sensitivity (*Gholami et al., 2017*). Opioid misuse has been reported between 26.4 and 36 million people worldwide (*Borys D et al., 2015*). The number of opioid overdose deaths has risen over the past two decades in many countries (*Farrugia et al., 2018*).

Substance abuse directly contributes to significant morbidity and mortality and increases in transmission of HCV and HIV infections (*Li P. H et al., 2018*).

The main cause of the opioid plague was the intentional abuse of opioids for their euphoric effects and change of use from prescribed medical use to dependence, There is a surge in the number of opioids being prescribed to patients, and many of them accumulate in households where relatives, friends or acquaintances could find them.

Reports indicate that it is safe, powerful marketing of opioids by pharmaceutical companies and Healthcare institutes to help improve pain management. Still, it was accompanied by unawareness of pain relief (Kido et al. 2017).

In our study, we aimed to Study the management, sociodemographic factors, and substance abuse among patients admitted with acute opiate toxicity to the National Environmental and Clinical Toxicology and Research Center (NECTR) during the period of the study. This work's outcome will help improve the outcome of patients admitted with acute opiate toxicity and statistically recognize the magnitude of the problem.

## MATERIALS AND METHOD

This is a prospective statistical study conducted on all acute opiate toxicity presented to NECTR during six months period from the beginning of October 2020 to the end of March 2021. Subjects had a history of either accidental or suicidal acute opiate toxicity. The study was authorized and approved by the local research ethics committee of Kasr Alainy faculty of medicine, Cairo University. The patients or their guardians were asked for their data collection and examination permission. Patients were classified into 3 groups according to their age: Group A → (less than 20 years), Group B → (20-40 years) and Group C → (more than 40 years). According to admission, patients were classified into: Not admitted, less than one day, and More than one day; concerning the outcome, Patients were classified into 3 groups: Cured, Discharged upon their request and Died.

**Inclusion Criteria:** Both sexes. All ages and Cases that are admitted to NECTR with acute opiate toxicity during the period of the study.

**Exclusion Criteria:** Patients with chronic opiate toxicity.

**Methods:** Cases were analyzed for: Demographic data: age, sex, residence, occupation and marital status. Primary data for patients' assessment include Substance of abuse, Manner of intake. History of addiction, Data concerning physical examination on admission:

**Symptoms:** gastrointestinal, respiratory, cardiovascular and central nervous system symptoms.

**Signs:** Vital signs: pulse, blood pressure, temperature, respiratory rate. Conscious level and pupil size.

**Examination:** cardiovascular, chest, gastrointestinal and neurological systemic examination.

**Data concerning laboratory investigations:** Routine investigations: arterial blood gases (ARG), random blood sugar (RBS). Specific investigations (toxicological screening).

**Data regarding lines of treatment:** Supportive management, Gastrointestinal tract (GIT) decontamination, use of antidote and whether the patient was admitted or not. Period of admission: Less than one day and more than one day. The case outcome (cured, discharge by own, death).

**Statistical Analysis:** Data were coded and entered using the statistical package for the Social Sciences (SPSS) version 26 (IBM Corp., Armonk, NY, USA). Data were summarized using frequency (count) and relative frequency (percentage). For comparing categorical data, Chi-square was performed. The exact test was used when the expected frequency was less than 5 (Chan, 2003). P-values less than 0.05 were considered statistically significant (Chan et al., 2003).

## RESULTS

This study was conducted on 98 cases presented to National Environmental and Clinical Toxicology research Centre (NECTR), Cairo University Hospital, from October 2020 to March 2021.

**1. Demographic data (table 1):** Age distribution among studied cases showed that 10.2% (10 patients) of presented cases were below age 20 years, 67.3% (66 patients) of presented cases were between ages 20-40 years and 22.4% (22 patients) were above age 40 years. Gender distribution among studied cases showed that 82.7% (81 patients) of the presented cases were males, while 17.3% (17 patients) were females. Residence among studied cases showed that the urban population

was more common, 80.6% (79 patients), than the rural population, 17.3% (17 patients). Marital status among studied cases showed that 58.2% (57 patients) of the presented cases were single, while 35.7% (35 patients) were married. Occupation among studied cases showed that 46% (45 patients) had work, while 54% (53 patients) were without work.

The substance of abuse; the most common substance of abuse was opiates (apart from tramadol) 63.3% (62 patients), followed by mixed intake of opiates with alcohol, clozapine,

clonazepam or pregabalin 26.5% (26 patients), then tramadol intake by 10.2% (10 patients). Manner of toxicity; The most common manner of toxicity was accidental 95.9% (94 patients), followed by suicidal 4.1% (4 patients). Accidental cases were: 3 cases during pain management, 4 children below 6 years old, and 87 cases of accidental intake in addictive patients. History of addiction; showed that 32.6% (32 patients) were known to be addicts, while 67.3% (66 patients) had no history of exposure to opiates.

**Table (1):** Demographic data of patients admitted to National Environmental and Clinical Toxicology and Research Center (NECTR) from October 2020 to March 2021

Patients	Number	Percentage
Age	Less than 20 years (10 patients)	10.2%
	20-40 years (66 patients)	67.3%
	More than years (22 patients)	22.4%
Gender	male (81 patients)	82.7%
	female (17 patients)	17.3%
Residence	Urban (79 patients)	80.6%
	rural (17patients).	19.4%
Marital status	(57 patients) single	58.2%
	(35 patients) married.	35.7%
Occupation	(45 patients) had work,	46%
	(53 patients) without work.	54%
Substance of abuse	(62 patients) opiates	63.3%
	(26 patient), mixed intake of opiates with alcohol, clozapine, clonazepam or pregabalin	26.5%
	(10 patients) tramadol	10.2%
Manner of toxicity	(94 patients) accidental	95.9%
	(4 patients) suicidal	4.1%
History of addiction	(32 patients) addicts	32.6%
	(66 patients) no history of opiates.	67.3%

## 2. Clinical manifestations (table 2):

Pupil size: 13.3% of cases were normal, while 86.7% were constricted, Temperature: 83.7% of cases were normal, 12.2% of cases presented with hypothermia, while 4.1% of cases presented with hyperthermia. Respiratory manifestations: 18.4% of cases were normal, while 81.6% of cases presented with respiratory symptoms. Blood pressure: 84.7% of cases were normal, 14.3% of cases presented with

hypotension and only one presented with hypertension. Pulse: 81.6% of cases presented with a normal pulse, 6.1% of cases presented with bradycardia and 12.2% of cases presented with tachycardia. Central nervous system symptoms were present in 85.7% of cases while absent in 14.3% of cases. Gastrointestinal manifestations: 85.7% of cases were normal, while 14.3% of cases presented with GIT symptoms.

**Table (2):** Clinical picture of the studied cases group A less than 20 years, group B (20- 40) years and group C more than 40 years:

Clinical picture		Count	%
Eye	Normal	13	13.3%
	Constricted	85	86.7%
Temperature	Normal	82	83.7%
	Hypothermia	12	12.2%
Respiration	Hyperthermia	4	4.1%
	Normal	18	18.4%
Blood pressure	Abnormal	80	81.6%
	Normal	83	84.7%
pulse	Low	14	14.3%
	High	1	1%
CNS	Normal	80	81.6%
	Low	6	6.1%
GIT	High	12	12.2%
	Normal	14	14.3%
	Abnormal	84	85.7%
	Normal	84	85.7%
	Abnormal	14	14.3%

**3. Investigations (table 3):**

Arterial blood gases (ABG) were measured in all cases. The results were normal in 6 cases (9.2%), respiratory acidosis in 50 cases (76.9%) and metabolic acidosis in 9 cases (13.8%). Regarding random blood sugars (RBS), normal blood sugars were in 20 cases (69.0%), hypoglycemia in 7 cases (24.1%) and hyperglycemia in 2 cases (6.9%). The toxicological screening was done on urine

samples by Dia sure drug test card. It is a rapid diagnostic test that works through enzyme immunoassay. Toxicological screening showed Opiates (apart from tramadol) in 13 cases (59.1%), tramadol in 2 cases (9.1%) and mixed results in 7 cases (31.8%): 2 cases opiates with benzodiazepines, 2 cases opiates with cannabis, a case tramadol with cannabis, a case opiates with tramadol, a case tramadol with benzodiazepines.

**Table (3):** Investigations done to studied cases group A less than 20 years, group B (20- 40) years and group C more than 40 years.

Investigations		Count	%
ABG	Normal	6	9.2%
	Respiratory acidosis	50	76.9%
	Metabolic acidosis	9	13.8%
RBS	Normal	20	69.0%
	Hypoglycemia	7	24.1%
	Hyperglycemia	2	6.9%
Toxic Screening	Opiates (apart from tramadol)	13	59.1%
	Tramadol	2	9.1%
	mixed	7	31.8%

#### 4. Treatment (table 4):

Regarding supportive treatment, 55 cases (56.1%) needed intravenous fluids and oxygen, intravenous fluids were provided to 9 cases (9.2%), oxygen was given to 32 cases (32.6%) and 2 cases (2%) needed no supportive treatment. 15 (15.3%) cases required

decontamination and the rest 83 cases (84.7%) did not require decontamination. Antidote was given to 83 cases (84.7%) and no antidote was given to 15 cases (15.3%). Regarding admission, 23 cases, 23.5% were admitted, 66 (67.3%) were admitted for less than 24 hours, and 9 (9.2%) were admitted for more than a day.

**Table (4):** Treatment done to studied cases group A less than 20 years, group B (20- 40) years and group C more than 40 years.

Treatment		Count	%
Supportive treatment	Intravenous fluids & oxygen	55	56.1%
	Intravenous fluids	9	9.2%
	Oxygen	32	32.6%
	No	2	2%
Decontamination	Yes	15	15.3%
	No	83	84.7%
Antidote	Yes	83	84.7%
	No	15	15.3%
Admission	No	23	23.5%
	<24hours	66	67.3%
	>24hours	9	9.2%

#### 5. Outcomes:

After treatment, 50% (49 patients) were improved, 38.8% (38 patients) were discharged upon request, while 11.2% (11 patients) complicated and died; one case died of brain

insult, one case died due to shock and rest of cases died due to respiratory failure, as shown in Table (5).

**Table 5:** Outcome of health condition of studied cases;

Patient status	Number
Improved	45 (47.9%)
Discharge upon request	38 (40.4%)
Died	11 (11.7%)
brain insult	1 (1.06%)
shock	1(1.06%)
respiratory failure	9(9.57%)

Table 6, 7 and 8 denoted there was no statistically significant relationship between age, sex, residence, marital status, occupation, the substance of abuse, manner of toxicity, history of addiction, eye manifestations, gastrointestinal manifestations, respiratory manifestations, central nervous system, random

blood sugar, toxicology screening, need for decontamination, supportive treatment, need for antidote and outcome (**p-value > 0.05**) There was a statistically significant relation between admission, temperature, blood pressure, pulse and outcome (**p-value < 0.05**).

**Table 6:** Relation between the outcome and the demographic data of studied cases:

		Outcome						p-value
		Improvement		Discharge upon request		Complication		
		Count	%	Count	%	Count	%	
Age	<20y	3	33.30%	4	44.40%	2	22.20%	0.454
	20-40	34	53.10%	23	35.90%	7	10.90%	
	>40	8	38.10%	11	52.40%	2	9.50%	
Sex	male	41	51.90%	29	36.70%	9	11.40%	0.174
	female	4	26.70%	9	60.00%	2	13.30%	
Residence	urban	34	44.70%	32	42.10%	10	13.20%	0.74
	rural	9	56.30%	6	37.50%	1	6.30%	
Marital status	married	17	50.00%	14	41.20%	3	8.80%	0.791
	single	26	46.40%	22	39.30%	8	14.30%	
Occupation	yes	21	47.70%	18	40.90%	5	11.40%	0.993
	no	24	48.00%	20	40.00%	6	12.00%	
Substance	opiates	34	55.70%	22	36.10%	5	8.20%	0.173
	tramadol	4	44.40%	4	44.40%	1	11.10%	
Manner	mixed	7	29.20%	12	50.00%	5	20.80%	0.459
	accidental	44	48.90%	35	38.90%	11	12.20%	
	suicidal	1	25.00%	3	75.00%	0	0.00%	
Addict	Yes	13	40.60%	13	40.60%	6	18.80%	0.264
	No	32	51.60%	25	40.30%	5	8.10%	
	Intravenous fluids & oxygen	20	37.70%	23	43.40%	10	18.90%	
Antidote	Yes	39	48.80%	31	38.80%	10	12.50%	0.71
	No	6	42.90%	7	50.00%	1	7.10%	
Admission	No	21	95.50%	1	4.50%	0	0.00%	< 0.001
	<24h	22	34.90%	36	57.10%	5	7.90%	
	>24h	2	22.20%	1	11.10%	6	66.70%	

**Table 7:** Relation between the outcome and the clinical picture of studied cases:

		Outcome						p-value
		Improvement		Discharge upon request		Complication		
		Count	%	Count	%	Count	%	
Eye	Normal	6	50.00%	5	41.70%	1	8.30%	1
	Constricted	39	47.60%	33	40.20%	10	12.20%	
Temperature	Normal	42	53.20%	30	38.00%	7	8.90%	0.003
	Hypothermia	1	9.10%	8	72.70%	2	18.20%	
	Hyperthermia	2	50.00%	0	0.00%	2	50.00%	
Gastrointestinal tract	Normal	39	48.10%	33	40.70%	9	11.10%	0.835
	Abnormal	6	46.20%	5	38.50%	2	15.40%	
Respiration	Normal	7	41.20%	9	52.90%	1	5.90%	0.514
	Abnormal	38	49.40%	29	37.70%	10	13.00%	
Blood pressure	Normal	46	55.40%	3	36.10%	7	8.40%	0.01
	Low	3	21.40%	8	57.10%	3	24.40%	
	High	0	0.00%	0	0.00%	1	13.00%	
Pulse	Normal	44	55%	31	38.80%	5	6.30%	0.006
	Low	3	50%	2	33.30%	1	16.70%	
	High	2	16.70%	5	41.70%	5	41.70%	
Central nervous	Normal	6	42.90%	6	42.90%	2	14.30%	0.849
	Abnormal	39	48.80%	32	40.00%	9	11.30%	

**Table 8:** Relation between the Outcome and the investigation of studied cases:

		Outcome						p-value
		Improvement		Discharge upon request		Complication		
		Count	%	Count	%	Count	%	
Arterial blood gases	Normal	3	50.00%	2	33.30%	1	16.70%	0.527
	Respiratory acidosis	18	37.50%	22	45.80%	8	16.70%	
	Metabolic acidosis	1	12.50%	6	75.00%	1	12.50%	
Random blood sugar	Normal	2	10.00%	13	65.00%	5	25.00%	0.171
	Hypoglycemia	3	42.90%	4	57.10%	0	0.00%	
	Hyperglycemia	0	0.00%	1	50.00%	1	50.00%	
Screening	opiates	5	38.50%	5	38.50%	3	23.10%	0.921
	Tramadol	0	0.00%	1	50.00%	1	50.00%	
	mixed	3	42.90%	2	28.60%	2	28.60%	

**Table 9:** Relation between the outcome and the treatment of studied cases:

		Outcome						p-value
		Improvement		Discharge upon request		Complication		
		Count	%	Count	%	Count	%	
Supportive treatment	No	1	50%	1	50%	0	0.00%	0.138
	oxygen only	20	64.50%	10	32.30%	1	3.20%	
	Intravenous fluids	4	50%	4	50%	0	0.00%	
	Intravenous fluids & oxygen	20	37.70%	23	43.40%	10	18.90%	
Decontamination	Yes	7	50.00%	7	50.00%	0	0.00%	0.394
	No	38	47.50%	31	38.80%	11	13.80%	
Antidote	Yes	39	48.80%	31	38.80%	10	12.50%	0.71
	No	6	42.90%	7	50.00%	1	7.10%	
Admission	No	21	95.50%	1	4.50%	0	0.00%	< 0.001
	<24h	22	34.90%	36	57.10%	5	7.90%	
	>24h	2	22.20%	1	11.10%	6	66.70%	

## DISCUSSION

Throughout human history, opioids have been used in medicine for analgesia and as a recreational drug for their euphorogenic effect. Today, opioids remain the essential analgesic management for severe acute, perioperative, and chronic pain (*Banta-Green et al., 2017*). Opioids are associated with serious risks to patients and the community, including misuse, abuse, diversion, addiction, and overdose morbidities and mortalities (*Tuteja et al., 2010*).

Compared to the global incidence, a higher incidence of substance abuse in Egypt, especially in Great Cairo, was reported by the national research for addiction from 2007 through 2014 (*Golightly et al., 2017*). Most opioid-related morbidities directly result from opioid intoxication, while others are due to related traumatic injuries, injection site infections, and endocarditis. Unfortunately, these patients are less compliant with follow-up advice, resulting in recurrent Accidents, Emergency visits and hospitalizations (*Shakeri et al., 2020*). This prospective study was conducted on cases of acute opiate overdose presented at the National Centre for Clinical & Environmental Toxicology (NECTR), Cairo University Hospital, for six months from the beginning of October 2020 to the end of March 2021. Age groups in our present study; the most affected age group was those between 20-40 years (67.3%) followed by those above 40 years (22.4%). The least affected group was those below 20 years (10.2%).

In agreement with our findings, the results from the de-addiction center of a tertiary care hospital in North India (March 2018-June 2018) on the pattern of opioid misuse among 74 patients, the majority of patients (83.78%) were between 20 and 40 years of age (*Dadpour et al., 2020*). Regarding the outcome of cases in the present study, (47.9%) of cases were improved, (40.4%) of cases were discharged upon request, while (11.7%) of complicated and died.

This agreed with a study conducted by (*EIHelaly et al., 2015*) in January–September 2016. Healthcare Cost and Utilization Project National Readmissions Database (HCUP-NRD) stated that 63.4% of 58,850 cases were routinely discharged, and 3.8% died. Another study in West Virginia Poison Center (August

2016) conducted by (*Vallersnes et al., 2017*) stated that 60% of cases were discharged against medical advice.

This disagreed with the European Drug Emergencies Network (October 2013–September 2014) result regarding opioid use in 5529 emergency presentations, which stated that only 17.3% of patients were self-discharged (*Toce et al., 2017*). Concerning the relation between age and outcome among cases in the present study, 22.2% of cases below 20 years old were complicated and died, while 9.5% of cases above 40 years old were complicated and died.

A systematic review of opioid-related deaths in the United States and Canada between 1990 and 2013 (*Kelty et al., 2017*) disagreed with our study. It stated that death rates were higher in middle-aged individuals. Also, another study (*Peterson et al., 2019*) from the Office of Data Management and Outcomes Assessment, Massachusetts Department of Public Health, on all- age death during 2011–2014 (n = 188 561) revealed that death rates from opioid overdose were higher in middle-aged cases. Regarding the relation between the history of addiction and the outcome of cases in the present study, 18.8% of cases with a history of addiction died, and 8.81% of cases with no history of addiction were complicated and died.

In agreement with our findings, a study performed by (*Baumgartner et al., 2021*) on 432 unintentional drug overdose deaths identified from records of the Utah Office of the Medical Examiner (OME) in Utah during October 26, 2008–October 25, 2009, stated that 61.4 % of decedents had the previous history of illicit substances abuse.

As regards the relation between sex and the outcome of cases in our study, 11.4% of male cases were complicated and 13.3% of female cases were complicated and died.

On the other hand, a systematic review of opioid-related deaths in the United States and Canada between 1990 and 2013 (*Massey et al., 2017*) revealed that death rates were higher in males. With respect to the relation between the substance of abuse and outcome among cases in the present study, 8.2% of cases with opiates (other than tramadol) complicated, 11.1% of cases with tramadol complicated, and 20.8% of

cases with mixed intake complicated and died. A study conducted by (*Burton et al., 2019*) in Veterans Health Administration (VHA) on veterans who died from an opioid overdose (n=2400) during 2004-2009 agrees with our findings and found that the use of benzodiazepines was associated with an increased risk of death. Another study (*Hassamal et al., 2018*) using 2010 mortality data from the National Vital Statistics System multiple cause-of-death files revealed that 5017 cases (30%) of 16651 opioid deaths mixed opioids with benzodiazepines. There was no relation between occupation and the outcome of cases in the present study where 11.4% of cases with occupation died and 12% of cases without occupation complicated and died. A study performed by (*Carey et al., 2017*) on 432 unintentional drug overdose deaths identified from records of the Utah Office of the Medical Examiner (OME) in Utah during October 26, 2008–October 25, 2009, disagreed with our findings and stated that only 36.8 % of decedents had an occupation as regards the relation between residence and the outcome of cases in the present study, 13.2% of cases coming from urban areas complicated, and 6.3% of cases from rural areas complicated and died. A systematic review of opioid-related mortality in the United States and Canada between 1990 and 2013 conducted by (*Peterson et al., 2019*) disagreed with our study and revealed that death rates were higher in cases from rural areas. Regarding the relation between supportive treatment and outcome among cases in the present study, 18.9% of cases that received intravenous fluids & oxygen were complicated.

This disagrees with a study on 50 cases in Payambaran Hospital, Tehran, Iran, conducted by (*Vallersnes et al., 2017*) that stated that all patients improved after supportive care.

### CONCLUSION

We concluded that the most common acute opiates toxicity in patients admitted to the national environmental and clinical toxicology and research center was group B 20-40 years that came from an urban area that was popular in the male case with single marital status, the most common was accidental without work with tramadol toxicity.

### RECOMMENDATIONS

Training physicians, in all specialties, about the indications, dosing, adverse effects and overdose of opiates. Patients should be administered as few opiates as possible for as short a time as possible. Physicians should avoid prescribing opioid pain medication with benzodiazepines or other dangerous combinations to avoid the risk of overdose. Campaigns in the media, public health strategies and targeted educational programs should help in primary preventive measures of opiates abuse. Referring patients with opiates abuse to addiction centres for assessment and psychological rehabilitation is an important issue to avoid recurrent overdoses. Religious awareness for drug abuse prevention especially among young males.

**CONFLICT OF INTEREST:** authors had no conflict of interest

**CODE NO.** of the approved local research ethics committee of Kasr Alainy faculty of medicine, Cairo University, is MS-310-2020.

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## الملخص العربي

دراسة مستقبلية لتقييم إدارة السمية الحادة من المواد الأفيونية في المرضى الذين دخلوا المركز القومي للسموم الإكلينيكية و البيئية

### بقصر العيني

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1 قسم الطب الشرعي والسموم الإكلينيكية

جامعة القاهرة –كلية الطب

2 قسم طب الصناعات والأمراض المهنية

جامعة القاهرة –كلية الطب

إن المواد الأفيونية تعتبر أحد أهم المجموعات العلاجية التي تستخدم في علاج الألم، وهي فعالة في علاج الألم الحاد و الألم الناتج عن الأورام لكن يساء استخدامها إلي حد كبير ويوجد من 26.4 مليون إلي 36 مليون شخص يتعاطي المواد الأفيونية حول العالم. وقد ازداد عدد الوفيات بسبب المواد الأفيونية في العقدين الماضيين في بلدان عديدة بسبب الجرعات الزائدة في المقام الأول و بسبب نقل عدوي التهاب الكبد الوبائي فيروس سي و عدوى الأيدز. تهدف الدراسة الحالية إلي تقييم إدارة تعاطي المخدرات والعوامل الاجتماعية الديموغرافية المتعلقة بها في الحالات التي تم إدخالها إلي المركز القومي للسموم الإكلينيكية والبيئية بمستشفيات جامعة القاهرة خلال فترة ستة أشهر من أول أكتوبر 2020 إلي نهاية مارس 2021. لقد تمت هذه الدراسة المستقبلية علي ثمان وتسعين حالة من كلا الجنسين وشملت جميع الفئات العمرية وتم جدولة النتائج تحليلها إحصائياً.