



ATTEMPTED SUICIDE POISONING AND ITS POST PSYCHIATRIC TREATMENT: A RETROSPECTIVE RECORD BASED STUDY AT A TERTIARY CARE CENTRE IN MANDYA

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Abstract :

BACKGROUND: Around Eight Lakh people worldwide die from suicide every year. Poisoning is the most common method of committing suicide in India. Among all poisoning cases, many patients present to the emergency department with complaints of intentional poisoning are presented with Depressive and other psychiatric disorders. Those who are actively involved in suicidal attempts may be referred to psychiatric care. In those with mental health problems, number of treatments may reduce the risk of suicide. Management of poisoning and post psychiatric care helps the patient to resolve both physical and mental health. **OBJECTIVES:** To describe the treatment for poisoning and post psychiatric treatment after the management of poisoning. **METHODOLOGY:** A retrospective record-based study was carried out for a period of 6 months, all the individuals admitted due to intentional poisoning and was referred to psychiatric department of MIMS, Mandya. **RESULTS:** A total of 152 patients' information had taken, among them 83 were males and 69 were females. Most of them belonged to the age group of 21-30 (42.76%). The most commonly used poison was found to be insecticides (29.92%). Psychiatric issue (44.73%) was found to be the most common cause for the suicide attempts. Antacids, rehydration fluids were the most commonly administered therapeutic treatment. 27 patients were given antidotes for the poison. Majority of the poison cases were treated with the primary non-pharmacological treatment (stomach wash, RT aspiration and NPO). Later the psychiatric problems were evaluated and 50.65% of the patients were treated with anti-depressants. Nonpharmacological managements such as counselling, psychoeducation, CBT, psychotherapy were also provided to the patients. **CONCLUSION:** The findings revealed that psychiatric issues were the most common cause for suicides and was common among the age group of 21-30. And the management of the poisoning were mainly done by stomach wash and rehydration therapies followed by psychiatric management mainly by anti-depressants and psychiatric counselling.

Keywords – Suicide, Psychiatric issues, Stomach wash, NPO (Nothing by Mouth), Antidotes.

INTRODUCTION

Individuals who suffer from mental illnesses are more likely to commit suicide. Nearly 90% of suicide victims in some places had an underlying mental illness. Mood disorders, substance use disorders, schizophrenia, and borderline personality disorder are important factors associated with suicide. A person is even more at risk of suicide if they suffer from many psychological disorders. This indicates that a higher risk of self-harm or suicide is frequently associated with numerous illnesses. In essence, having multiple mental health conditions might significantly increase one's risk of suicide.

Many patients who have intentionally poisoned themselves visit the emergency room. Major Depressive Disorder has already affected a few of these people (MDD). The purpose of this study was to determine the frequency of MDD patients receiving poisoning treatments in the ER. The main objective was to ascertain the percentage of poisoning cases that involved individuals who had received a previous diagnosis of MDD.

Poisoning is the most popular means of suicide in India. Numerous therapies can lower the risk of suicide in persons with mental health conditions. Individuals who are seriously contemplating suicide may be involuntarily or willingly admitted to a mental health hospital. Usually, dangerous objects that could be used to commit suicide are taken out. The patient may be treated as an outpatient if the danger is lower. Evidence does not support the notion that short-term hospitalization is a better treatment option than continued community care for people with borderline personality disorder who exhibit persistent suicide thoughts.

One of the main risk factors for suicide is having a psychiatric disorder (PD). People with any kind of Parkinson's disease (PD) are more likely to attempt or complete suicide, according to studies. Individuals with psychotic disorders, mood disorders, and personality disorders have the highest incidence of suicide.

Making the decision to admit someone to a mental health facility following self-harm is difficult and little understood. Research indicates that persons who are homeless, jobless, older than 25, have recently received psychiatric treatment, or have a history of self-harm are among those who are more vulnerable. Getting married and appearing after hours are examples of lower risk factors. These findings affect clinical recommendations and offerings.

Psychiatrists were evaluated on how they responded to situations in which patients self-poisoned, and frequently they omitted to specify their therapeutic objectives. The outcomes emphasize the necessity of more instruction in comprehending the causes of self-poisoning.

EPIDEMIOLOGY OF SUICIDE AMONG PSYCHIATRIC PATIENTS AND SUICIDE RISK

People with severe mental health issues tend to have significantly shorter lifespans compared to the general population. On average, women with these conditions live about 15 years less, while men live about 20 years less. Suicide risk is much higher in these individuals, with men facing a 9 to 37 times greater risk and women facing a 13 to 77 times greater risk. The greatest risk is seen in those with mood disorders, while those with substance abuse problems have the lowest risk. Most people with serious suicidal thoughts, plans, or attempts had a history of mental health issues. Those who made planned suicide attempts were more likely to have a history of mental disorders compared to those who made unplanned attempts. This suggests that stressful life events might play a bigger role in unplanned attempts. Depression was linked to having suicidal thoughts but was less connected to making plans or attempts. In contrast, severe anxiety or poor impulse control, seen in disorders like PTSD (Post Traumatic Stress Disorder) or substance abuse, were better predictors of making suicide plans or attempts.

Suicide risk is influenced by various factors that accumulate over time, with individual psychiatric disorders having the most substantial effect. Conditions like depression, bipolar disorder, schizophrenia, substance use disorders, epilepsy, and traumatic brain injury, Dissociative disorder, Suicide tendency in children, Inadequate parenting can more than triple the likelihood of suicide

MATERIALS AND METHODS

The present study was conducted at MIMS Teaching Hospital, a 550-bedded tertiary care teaching hospital located in Mandya, offering specialized healthcare services in various departments including Medicine, Surgery, Orthopaedics, Paediatrics, Obstetrics, and Gynaecology to residents of Mandya city and nearby villages. This retrospective, record-based study was carried out in the General Medicine Department and focused on patients admitted due to attempted suicide by poisoning who were referred to the Psychiatry Department. The study spanned a total of six months following ethical approval, with four months dedicated to data collection and two months for analysis and report writing. The study population included patients admitted with suicide poisoning, and a total of 152 case sheets were reviewed over the four-month period. The sample size was calculated using the formula $n = 4pq/d^2$, considering a mental illness prevalence rate of 10.6%, and convenience sampling was employed. Ethical clearance was obtained from the Institutional Ethics Committee of MIMS Teaching Hospital.

STUDY CRITERIA

- a) Inclusion criteria
 - Records of patient admitted for poisoning and who are referred to Pscychiatric Department.
 - Both sexes are included.
- b) Exclusion criteria:
 - Nil

METHOD OF DATA COLLECTION (STUDY TOOLS)

A pretested semi structured proforma will be used to collect the following data, sociodemographic details like Age, Gender, IP Number. It also contains details on diagnosis, treatment and management. Proformas help streamline processes, facilitate communication, and maintain organization across different tasks or projects. It typically serves as a template to ensure consistency and completeness in data collection or reporting.

Analysis: Data collected will be coded and checked for completeness and uniformity, then data will be entered in MS Excel worksheet and descriptive statistics was used and the results were presented as tables, graphs or expressed as percentages according to the type of information collected. For continuous variables, mean and standard deviations information collected.

RESULTS

This Retrospective record-based study was conducted in a tertiary care hospital in Mandya. A total of 152 individual's details were documented in an appropriately designed patient profile form according to inclusion and exclusion criteria.

BASED ON GENDER

Based on our study a total of 152 patient information had taken, among them 83 were males and 69 were females, their proportions being 54.60% and 4.39% respectively. Our study showed that males were found to be more in number than females.

| GENDER | NUMBER OF PATIENTS |
|--------|--------------------|
| Male | 83 |
| Female | 69 |
| Total | 152 |

Table 1: Distribution of patients based on gender

BASED ON AGE

In our study, all patients were divided into 8 groups. Most of them belong to the age group of 21-30 which is about 42.76% of total patients. This group was followed by the age group 11-20, which is about 25.65% of the total patients. The age groups 50 and above showed least number of cases which had a combined percentage below 8%.

| AGE GROUP | NUMBER OF PATIENTS | PERCENTAGE |
|-----------|--------------------|------------|
| 11-20 | 39 | 25.65% |
| 21-30 | 65 | 42.76% |
| 31-40 | 24 | 15.78% |
| 41-50 | 13 | 8.55% |
| 51-60 | 7 | 4.60% |
| 61-70 | 3 | 1.97% |
| 71-80 | 1 | 0.65% |
| Total | 152 | 100% |

Table 2: Distribution of patients based on Age

BASED ON THE TYPE OF INGESTED POISON

This study shows that the most commonly used poison was insecticides (29.92%), this was followed by drugs (27.55%), rodenticides (10.23%), herbicides (8.6%), fertilizers (7.08%), fungicides (3.93%) and pesticides (3.14%).

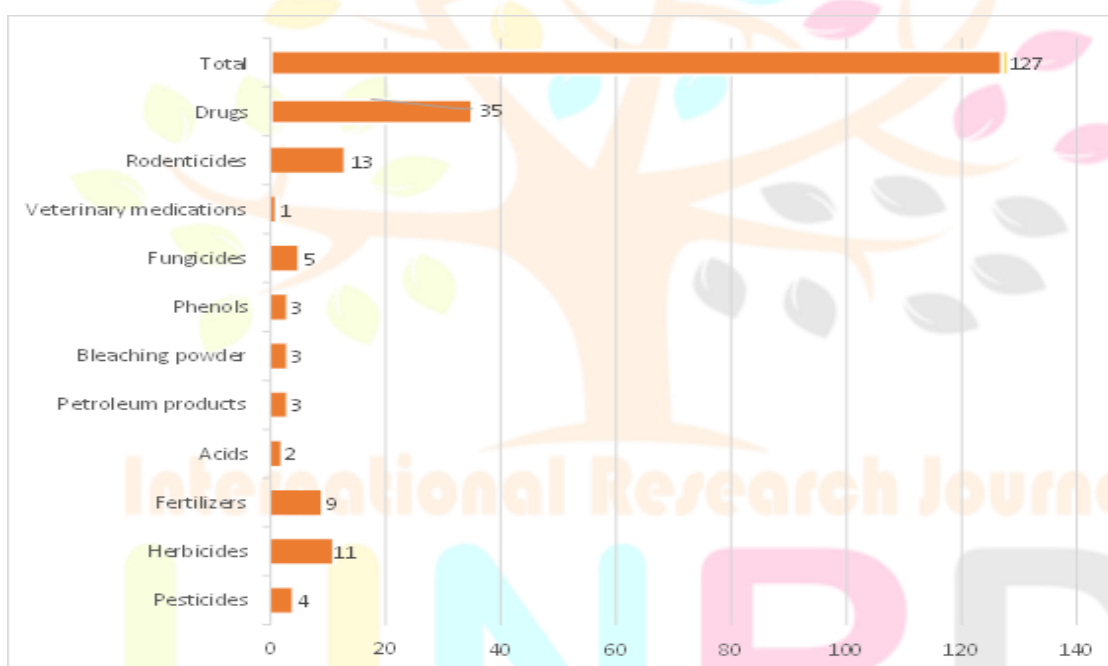


Figure 1: Distribution of patients based on the type of ingested poison

BASED ON REASONS FOR SUICIDE

Based on our study, the most common reason for suicide was found to be psychiatric issues, which accounted 44.73% of the total poisoned cases, in which alcohol dependence was the main issue. This was followed mainly by family problems (29.60%) and financial issues (11.84%). Other reasons like loss of dear ones, phobias, love failure, conflicts and disabilities accounted for less than 10% of the cases. This study concludes that the most common reason for suicide was an underlying psychiatric illness, and these results were in concordance with the study of Danutta Wasserman MD *et al.*, (2021).

| REASONS | NUMBER OF PATIENTS | PERCENTAGE |
|--------------------------|--------------------|------------|
| Psychiatric issues | 68 | 44.73% |
| Family issues | 45 | 29.60% |
| Financial issues | 18 | 11.84% |
| Loss of dear ones | 8 | 5.26% |
| Phobias | 5 | 3.28% |
| Love failure | 4 | 2.63% |
| Conflict with neighbours | 3 | 1.79% |
| Due to disability | 1 | 0.65% |
| Total | 152 | 100% |

Table 3: Distribution of patients based on reasons for suicide

TREATMENT FOR POISONING

DISTRIBUTION OF DRUGS BASED ON CATEGORY

Our study showed that antacids (75.65%), antiemetics (77.86%), rehydration fluids (78.28%) and supplements (36.84%), were the most common first line therapeutic treatment provided to the poisoned patients. A total of 27 patients were given antidotes, the proportion being 17.76% of the total cases. Our study shows that the main aim of treatment for the poisoned cases was re-establishing the stability of the patient.

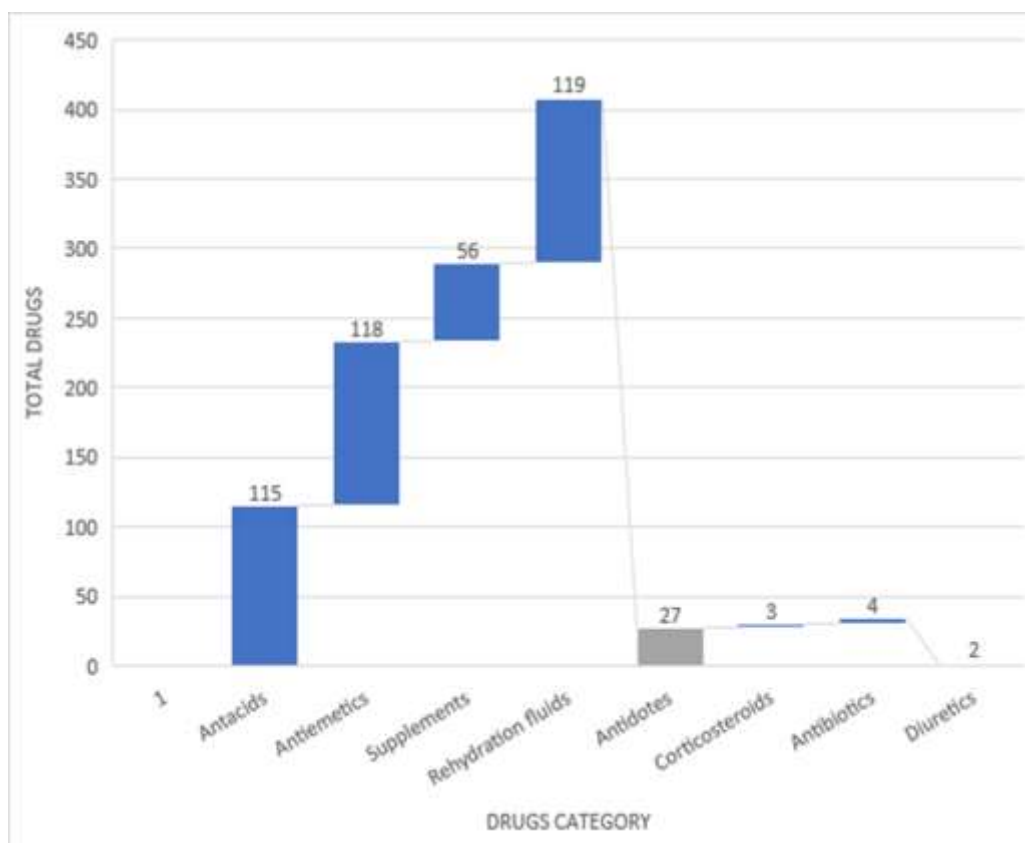


Figure 2: Distribution of pharmacological treatment among poison patients

BASED ON NON-PHARAMACOLOGICAL TREATMENTS

Based on our study, the mainly practised non-pharmacological treatments were stomach wash, RT aspiration, NPO (Nil Per mouth) which commonly means “nothing by mouth” and gastric lavage with RT insertion, their proportions being 85.5%, 82.89%, 72.36% and 2.63% respectively.

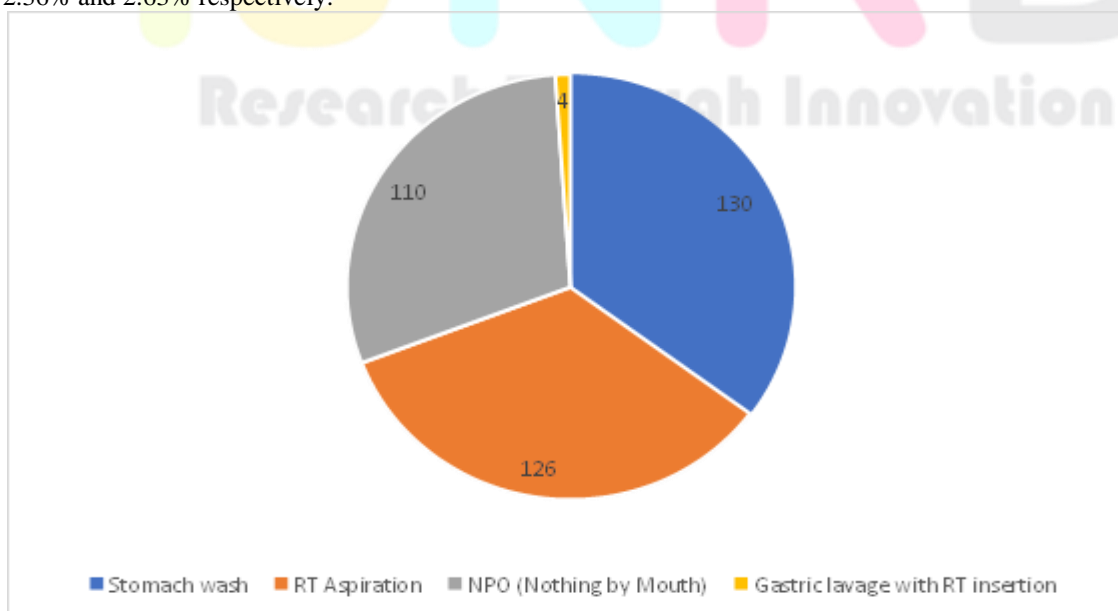


Figure 3: Distribution of non-pharmacological treatment among poisoning patient

PSYCHIATRIC TREATMENT

DISTRIBUTION OF DRUG BASED ON CATEGORY

Based on our study, Anti-depressants (50.65%) were the most commonly used drug for psychiatric treatment. Lorazepam, Escitalopram and clonazepam were the most commonly used anti-depressants. This was followed by anti-psychotics which accounted for only 5.26%. Other medications like proton pump inhibitors (23.02%) and nutritional supplements (38.15%) were administered to the patients.

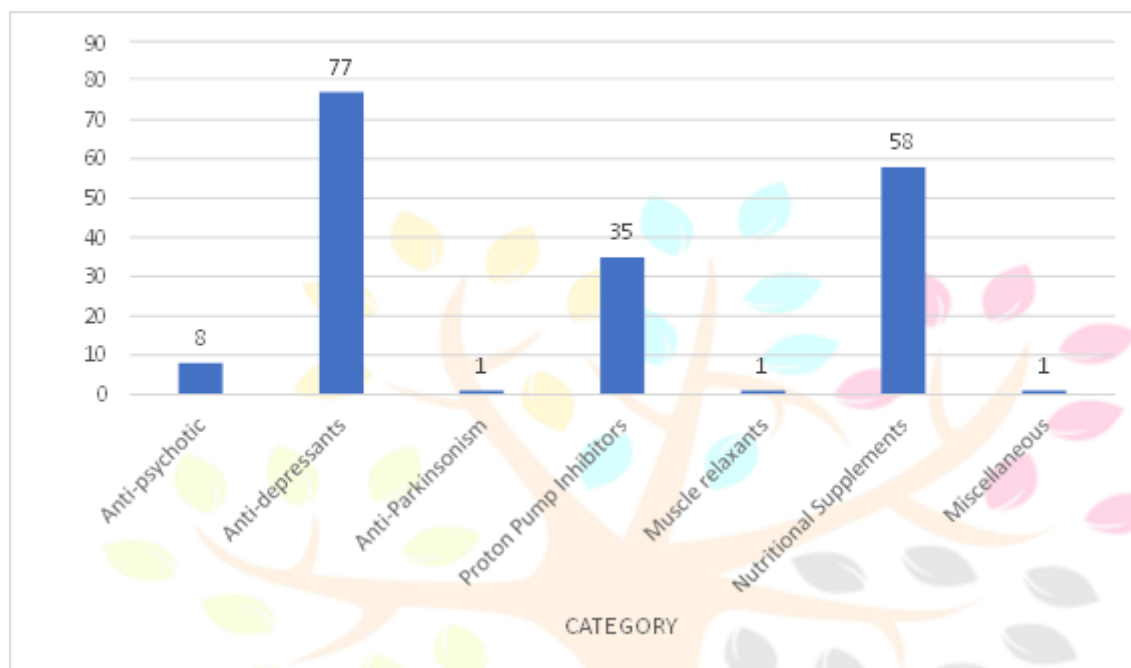


Figure 4: Distribution of pharmacological treatment among psychiatric patients

BASED ON NON-PHARAMACOLOGICAL TREATMENTS

Based on our study, 75.65% of the cases were given counselling, 67.76% patients were given psycho education, 32.23% patients were given supportive care and 29.60% patients were provided with psychotherapy. CBT, family focused therapies and group therapies were the other modes of non-pharmacological treatment provided to the patients.

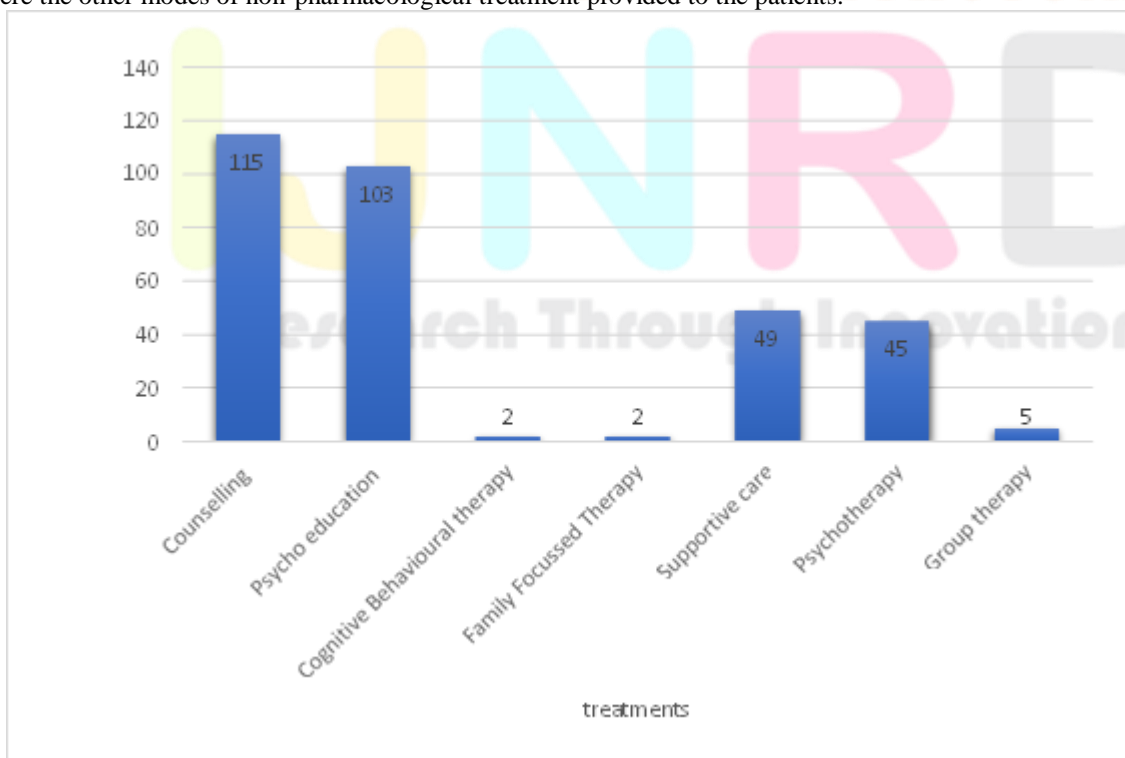


FIGURE 5 : DISTRIBUTION OF NON-PHARMACOLOGICAL TREATMENT AMONG PSYCHIATRIC

DISCUSSION:

In our study, data was gathered from 152 patients, of which 83 were males (54.60%) and 69 were females (45.39%), indicating a higher proportion of males affected compared to females.

The patients were categorized into eight age groups, with the largest group being 21-30 years old, comprising 42.76% of the total. This was followed by those in the 11-20 age group, accounting for 25.65%. Patients aged 50 and above formed the smallest group, contributing to less than 8% of the cases combined.

When examining the substances involved in poisoning, insecticides were the most frequent, responsible for 29.92% of the cases. Drugs were the second most common, representing 27.55%, followed by rodenticides (10.23%), herbicides (8.6%), fertilizers (7.08%), fungicides (3.93%), and pesticides (3.14%).

Psychiatric issues were identified as the leading cause of suicide-related poisoning, accounting for 44.73% of cases, with alcohol dependence being the primary issue. Other significant factors included family problems (29.60%) and financial difficulties (11.84%). Less common causes, such as loss of loved ones, phobias, love failures, conflicts, and disabilities, collectively represented less than 10% of cases. These findings align with the results of a 2021 study by Danutta Wasserman MD et al., which also identified psychiatric illness as a prevalent cause of suicide.

Regarding treatment, the most common interventions included antacids (75.65%), antiemetics (77.86%), rehydration fluids (78.28%), and supplements (36.84%). Additionally, 27 patients (17.76%) received antidotes, with the primary aim of stabilizing the patients' conditions.

Non-pharmacological treatments, such as stomach wash (85.5%), RT aspiration (82.89%), NPO (72.36%), and gastric lavage with RT insertion (2.63%), were also widely used

ACKNOWLEDGMENT:

The assistance from the Mandya Institute of Medical Sciences is gratefully acknowledged.

CONFLICT OF INTEREST :

Nil

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