Psychiatric morbidity among intoxicated patients of the Poison Control Centre

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Abstract

This study aimed to assess the psychiatric morbidity in the intoxicated ICU patients of the Poison Control Centre of Ain-Shams University (PCC).

All patients attending the ICU of this centre between the first of June and the end of September (1991) were evaluated from the toxicological and the psychiatric points of view. Patients who showed any psychiatric morbidity were further assessed by the General Health Questionnaire and the Beck Depression Inventory.

A total of 132 patients were screened. The levels of psychiatric morbidity were found to be relatively high in this sample (66 cases = 50.38%). Twenty four of the patients (18.3%) were polydrug users, with alcohol being the most abused substance.

One third of the patients (32%) presented with serious suicidal attempts. Almost 38% were diagnosed as adjustment disorder with depressed mood, whereas only 0.5% had major depressive episode. Overdose of Digoxin and psychotropic drugs were the most common substances used in suicide. On the other hand, sixty five patients (49.6%) had no psychiatric disorder. In general, the study revealed relatively high rates of psychiatric morbidity in the ICU patients that necessitated the availability of consultation liaison psychiatry for patients in the Poison Control Centre.

Introduction As in all other areas of health care, it has become evident in emergency medicine, especially in relation to toxicologic emergencies, that psychological factors are significant in aetiology, outcome potential and options for prevention (*Gantieri et al., 1990*). However, accident and emergency departments have attracted little attention from psychiatric services. Research efforts in this area have concentrated on assessment and intervention in attempted suicide and other forms of self-harm. Knowledge of psychiatric status for the attenders of accident and emergency is restricted to those patients referred to consultation liaison services as psychiatric emergencies. Even among these patients, data tend to be restricted to retrospective studies (*Salkonskis et al.,1990*).

Therefore, there was more than one reason for investigating this area: first, the large number of psychologically determined attenders, if present, is likely to impair the efficiency of emergency departments. Second, although emergency staff are usually very aware of the psychological aspects of their work, it is unreasonable in present circumstances to expect them to be able to detect, assess and manage all patients for whom the presentation is mainly psychological. Speciality training is mandatory for such a task. Third, given the present imbalance between levels of psychiatric morbidity in the community and services available, emergency department may well constitute a cost-effective way of assessing distressed people who would not otherwise come to the attention of psychiatric care.

The aim of this study was to determine the current status of the condition by assessing the prevalence and types of psychiatric disorders in intoxicated patients in order to settle the appropriate lines of management.

Subjects and procedures The study was carried out on all patients admitted to the Intensive Care Unit (ICU) of the Poison Control Centre (PCC) Ain Shams University, within the four-month period (from June 1st to September 30th 1992).

Complete medical and laboratory assessments were made for every patient, using the routine toxscore method of the Centre. Psychiatric interview using the semi-structured interview of Ain Shams University was applied to each patient. Diagnosis was carried out according to the criteria of DSM-III-R (1987) system. The General Health Questionnaire was also used to help in the diagnosis of psychiatric disturbances. Beck Inventory of Depression was applied to patients who were diagnosed to have depression.

Interviewing of patients was done immediately after admission provided that the patient was fully conscious. In cases of disturbed consciousness or severe impaired physical condition, the interview was postponed for a maximum period of 48 hours after admission.

Results The total number of the sample was 132 patients. This included 73 males (55.3%) and 59 females (44.7%). Meanwhile, 61 patients (46.6%) were accidentally exposed to different poisonous materials (Table 1). Scorpion sting (12%) was the commonest,

followed by ingestion of corrosives (12.1). The mean age of this group was 11.6 ± 14.9 years; most of the patients admitted were children which reflected a rather high degree of neglect and ignorance at home. Not surprisingly, most of them came from low and middle social classes in which the mothers were usually illiterate.

As regards the group of patients who deliberately intoxicated themselves, their mean age was 24.1 ± 9.5 years. The male to female ratio was 1:2. There was a positive history of previous suicidal attempt in (16.2%). Types of poisonous materials used by these patients are shown in table (2). Different psychiatric diagnoses are shown in table (3). 9 patients (20.9%) of this group had previous psychiatric disorders, mostly depressive disorder, compared to two patients only among the rest of the sample. These two patients specifically were in the group of patients who were intoxicated as a therapeutic error; both were in a state of phenothiazine intoxication, in spite of the fact that their relatives insisted that they took the prescribed doses only a point that raised the possibility of memory defects or a possible metabolic error of the drug. Mortality rate among this group was 11% (5 patients), 4 of them were females. Their mean age was 33.2 years and all of them exhibited severe degrees of intoxication.

It is to be noticed that 78% (103 patients) of the sample showed an improved clinical state on discharge from the ICU. The period of stay reflected, in general, the grade of toxicity.

Table (1): Mode of poisoning in the total group of patients

Mode of poisoning			Total	%
Accidental	36	25	61	46.6
Self-poisoning	13	30	43	32.8
Addiction intoxication	22	-	22	16.8
Theraputic error	-	4	4	3.8
Chronic exposure	1	-	1	0.7
Side effect	1	-	1	0.7
Total	73 (55.3)	59 (44.7)	132	100

Table (2): Different poisonous materials used in deliberate self-harm by patients

Substances	No.	%
Insecticides	15	34.8
Digoxin	11	25.5
Corrosives	3	6.8
Phenothiazines	1	2.3
Tricyclic antidepressants	4	9.3
Barbiturates	1	2.3
Unknown	1	2.3
Miscellaneous	7	16.2
Total	43	100

Table (3): Psychiatric diagnosis of the patients attempting suicide

Diagnosis	No.	%
Adjustment disorder with depressed mood	18	41.8
Major depression	2	4.6
Dysthymic disorder	1	2.3
Schizophrenia	2	4.6
Anxiety disorder	1	2.3
Post-traumatic stress disorder	1	2.3
Personality disorder	1	2.3
Mental subnormality	1	2.3
No mental disorder	16	37.2
Total	43	100

In another 37% of cases there were stressful life events preceeding the attempts, but the patients' symptoms did not meet the criteria of a diagnosis disorder.

Table (4): Mortality among the different groups of patient

	Discharge		Death	
Mode of poisoning	No.	%	No.	%
Accidental	55	82	12	17
Self - poisoning	38	89	5	11
Addiction	10	46	12	5
Total	103	78	29	21.9

$X^2 = 33.8$ D.F. = 5 $P < 0.02$

Table (5): The commonest substances that caused intoxication

Substances	No.	%
Methyle alcohol	10	45.4
Opiates	6	27.2
Ethyl alcohol	5	22.7
Benzodiazepines	1	4.5
Total	22	100

Discussion This study revealed a relatively high rate of psychiatric disturbances in patients seen in the Poison Control Centre. 32.8% of patients deliberately poisoned themselves and 16.8% were substance-dependent cases in a state of intoxication. Taking into consideration the differences in the nature of the problem, these results are comparable to a number of studies carried out in other emergency departments. For example, Salkovekis et al. (1990) reported that 36.5% out of 140 patients attending emergency and accident departments had psychiatric disturbances. Also, psychiatric diagnosis was made in 37% of patients admitted to surgical and medical emergency and accident ward (*Ball et al., 1991*). In another study, 27% of medical emergency admissions

were found to have diagnosable psychiatric disorders, mostly mild (*Seltzer, 1989*). Unfortunately, psychiatric toxicological liaison work has been little reported.

In spite of the alarming increase in the incidence of self-poisoning in Western countries and the advances in clinical toxicology, formal psychiatric assessment of patients after acute poisoning remains contentious (*Proudfoot, 1988*). This partly reflects the milder nature of problems identified by ward staff and partly indifference to psychiatry (*Seltzer, 1989*).

Strangely enough, insecticides were the most commonly used toxic agent in our study, most probably because of its availability at homes, as well as its known poisonous effect. Usually these patients had very high suicidal intent. Digoxin came next in the list and it was used at a higher rate than expected. More than half of the patients who used it were chronic cardiac cases. Otherwise, it was a medication of one of the family members. Psychotropic drugs were used less frequently which contradicted reported literature (*Proudfoot, 1988*). However, the sample of the study represented a narrow sector of patients, only those admitted to ICU of the Poison Control Centre, a contributing factor to our results.

It is noteworthy that 63% of patients with deliberate self-poisoning had diagnosable psychiatric disorders (Table 4). The high rate of those patients meeting the diagnosis of adjustment disorder with depresseed mood, as well as those cases who had stressful life events preceeding the attempt but the patients symptoms did not reach the threshold of a diagnosable disorder (41.8% and 37% respectively). This points out to the fact that the stressors of life should not be underestimated as precipitants of deliberate self-harm. However, as implicated from the severity of symptoms, as indicated by the results of Beck Depressive Inventory, these attempts usually denote a cry for help rather than a wish to die (a point which adds to the importance of psychiatric intervention in the emergency department). This observation is further supported by the reporting of a short time delay, in the suicidal intoxication, between exposure and seeking help (*Bahira,1993*).

Meanwhile, 16.6% of patients with intentional self-poisoning had a previous attempt, all of them except one were females . No other clinical or demographic correlations could be identified as predictors to repeated suicidal attempts. Allgulander and Fisher (1990) reported several non-specific diagnostic predictors of repeated self-poisoning and failed to specify definite predictors.

Substance abusers constituted 16.8% of the total sample, their mean age was 40.2 years old and all of them were males, usually they had severe toxicological scores. Average stay at ICU was for longer periods, specially for those with opiates or mixed intoxication states. The main addictive substances that caused intoxication according to their frequency of occurence included alcohol that was responsible for about 68% of intoxicated cases. In 2/3 of these patients alcohol was the causative agent and severity was attributed to adulteration with methyl alcohol. This might reflect either a package of adulterated alcoholic beverages on the market during the time of the study or that methyl alcohol caused more serious states of intoxication that usually necessitated admission to ICU.

Mortality rate in this group was very high; 54% of the cases died compared to 13% of those who were accidentally poisoned and 11% of suicidal attempt cases. This pointed out to the seriousness of the intoxication resulting from addictive substances.

The explanation for that was related to the finding that most of these drugs were CNS depressants and patients used usually more than one type at a time leading to synergistic effects beside the unpredictable drug interactions.

To conclude, the findings suggest that greater psychological input to the emergency toxicologic department would be useful. Such input would free the emergency staff to deal more efficiently with physical trauma while serving the needs of those patients in whom attendance is related to psychological factors.

The liaison psychiatrist, the emergency psychiatrist, the social worker and the psychologist should be members of the crisis intervention team needed to care for the patient who was poisoned, drug overdosed or manifesting a withdrawal syndrome.

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الاضطرابات النفسية فى المرضى المترددين على مركز علاج السموم

يهدف هذا البحث إلى دراسة الاضطرابات النفسية فى المرضى المترددين على وحدة الرعاية المركزة بقسم السموم بجامعة عين شمس وذلك فى الفترة ما بين أول يونيو وآخر سبتمبر لسنة ١٩٩١ عن طريق استخدام استبيان الصحة العام ومقياس بيك الاكتئاب فيمن ظهرت لديهم أية أعراض أو تاريخ لإضطراب نفسى.

وكان مجموع ما تم درلسته من المرضى ١٣٢ مريضاً كانت نسبه الاضطراب النفسى فيهم ٥٠,٣٨ (٦٦مريضاً) منهم ٢٤ مريضاً (١٨,٣٠٪) ممن يعانون سوء استخدام أكثر من عقار على قائمتها الكحوليات، بينما ظهر فى ثلث المرضى (٣٢٪) محاولات انتحارية جادة وحوالى ٣٨٪ كان تشخيصهم من الناحية النفسية "اضطراب تكيفى مصحوب بمزاج اكتئابى " فى حين كانت نسبة من يعانون من اضطراب وجدانى اكتئابى ٠,٥٪ من مجموع المرضى. وكانت أكثر العقارات المستخدمة فى الانتحار هى عقار ال "ديجوكسين" والعقارات النفسية.

ومن ناحيه أخرى لم يظهر لدى ٦٥ مريضا (٤٩,٦٪) أية أعراض نفسية.

وتظهر هذه الدراسة بصفة عامة شيوع الاضطراب النفسى فى المرضى المترددين على مراكز السموم مما يحتم وجود فرصه للاستشارات النفسية فى مثل هذه المراكز.