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## THE FREQUENCY OF PSYCHIATRIC DISORDERS IN POISONING WITH DRUGS TREATED AT THE DEPARTMENT OF TOXICOLOGY, CLINICAL CENTRE NIŠ

### UČESTALOST PSIHIJATRIJSKIH POREMEĆAJA KOD TROVANJA LEKOVIMA NA ODELJENJU TOKSIKOLOGIJE KLINIČKOG CENTRA NIŠ

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**Summary: Background:** Poisoning is the leading cause of mortality, just behind the injuries in traffic accidents. Psychiatric disorders are distinguished as significant reasons for intentional self-poisoning.

**Aim:** To show the importance, the size and frequency of psychiatric disorders in poisoning drugs through the one-year analysis of hospitalized patients in Niš.

**Methodology:** Structured annual analysis of patients hospitalized at the Department of Toxicology in Niš during 2013 with a correlation of intentional poisoning with medications and psychiatric disorders.

**Results:** In 2013, at the Department of Toxicology, there were 115 patients. According to the representation in the first place are the patients who have used drugs, 58 (50.43%), and 57 of them were diagnosed some psychiatric disorder. From psychiatric disorders classified by International Classification of Diseases, affective disorders dominated in 22 cases (38.6%), neurotic and stress disorders in 14 cases (24.56%), followed by schizophrenia and schizoaffective disorders in 10 cases (17.54%), disorders due to psychoactive substance abuse in 4 cases (7.02%), personality disorders in 3 cases (5.26%), mental retardation in 2 cases (3.51%). At last, one case (1.75%) of psychoorganic syndrome and dissociative disorder behavior.

**Conclusion:** Psychiatric disorders are very common in cases of deliberate drug poisoning. The largest number of patients was registered with depressive syndrome of mild severity, although other serious disorders were not rare. For these categories of patients comorbidities contribute to suicidal risk. Acute toxicity requires urgent care with adequate psychiatric approach. Yet experience shows that despite the involvement of a large number of specialists in various fields, the percentage of recurrent intoxication remains high.

**Key words:** Medicament intoxication, psychiatric disorder, frequency

## BACKGROUND

According to the American Association of Poison Control Centers (AAPCC), the number of acute poisoning is on the rise, and every 90 seconds a toxic exposition is being reported. [1,2] Intoxications are the leading cause of mortality immediately after the injury in traffic accidents. Data on the number of poisoning are not complete and authentic because a significant number of poisonings are treated not only in the National Poison Control Center (NPCC), but also in other health institutions in Serbia, psychiatric wards, and often without adequate supervision of physicians or intensivists and toxicologists. Psychiatric disorders and parasuicide are distinguished as significant reasons for intentional self-poisoning. Regardless of the initial clinical picture of poisoning, it is always a state of emergency, whose treating entails adherence to the same principles that apply to all other emergencies in medicine. [3]

## OBJECTIVE

To determine the nature and prevalence of psychiatric disorders in patients with acute intentional drugs poisoning.

## METHODOLOGY

Structured annual analysis of patients hospitalized at the Department of Toxicology in Niš in 2013, with a correlation of intentional drugs poisoning with psychiatric assessments, which is a mandatory part of the treatment.

## RESULTS

During 2013, from 1,067 patients 115 patients were admitted to treatment. The largest number of poisoning 97 (84.34%), was registered as self-poisoning or suicide attempt. According to the representation in the first place as the dominant cause of poisoning are drugs 58 (50.43%), followed by pesticides 23 (20%), corrosives 20 (17.39%), alcohols and glycols 7 (6.09%), psychoactive substance abuse 3 (2.61%), fungi and plants 2 (1.74%) and

gases and organic solvents with one case (0.87%). Due to acute drug poisoning 58 patients were admitted. In the group of intoxication with psychotropic drugs, there were 34 patients (58.62%). Most of them were benzodiazepine poisoning 17 (50%), followed by poisoning of neuroleptics in 7 cases (20.59%). Antiepileptic drugs are registered in 7 patients (20.59%), at least was poisoning with antidepressants, 3 patients (8.82%). Reason for poisoning in 33 patients (97.06%) was self-poisoning. In the group of other drugs were 15 patients (25.86%), including analgesics as the dominant cause of poisoning registered in 5 patients (33.33%). Cardiac drugs were found in 4 patients (26.67%), anticholinergics in 3 patients (20%), there were 2 patients (13.33%) with sympathomimetic poisoning, and 1 case (6.67%) of anti-Parkinson poisoning. The dominant cause of poisoning remained unknown in 9 patients (15.52%).

In the group of 58 patients hospitalized for drug poisoning, 57 patients (98.28%) were diagnosed with a psychiatric disorder, and the same number of patients had a self-poisoning. Only one patient had an unknown cause of poisoning. One psychiatric disorder was found in 46 patients (80.7%), 2 or more psychiatric disorders were observed in 11 patients (19.3%). From a psychiatric disorders classified by International Classification of Diseases, 10th revision, the affective disorders (F30-F39) dominated in 22 cases (38.6%), of which 20 are depressive (35.09%) and 2 bipolar (3.51%). They were followed by 14 cases (24.56%) of neurotic and stress disorders (F40-F49), followed by 10 cases (17.54%) of schizophrenia and schizoaffective disorders (F20-F29), 4 cases (7.02%) due to psychoactive substance abuse (F10- F19), 3 cases (5.26%) in personality disorders (F60-F69), 2 cases (3.51%) in mental retardation (F70-F79), and one case (1.75%) of psychoorganic syndrome (F06) and dissociative behavioral disorders (F91).

## DISCUSSION

According to the recommendations of the European Association of Poison Control Centers, patients are treated in the units and

departments of health institutions in which there is a possibility for continuous monitoring of vital functions and proper medical supervision. At the admission of acute poisoned patient, priority is to assess the state of cardiorespiratory function and take appropriate measures to ensure a patent airway, breathing and circulation quality. Then provide cardiac monitoring, pulse oximetry and intravenous access, and admit to a unit according to the indications in relation to the clinical condition of the patient. [2,4,5] Psychotropic medications (anxiolytics and hypnotics, neuroleptics, antidepressants, lithium and carbamazepine, psychostimulants and psychodysleptics) in many countries are the most common cause of self-poisoning. Acute poisoning with these drugs represent a serious clinical problem, not only because of the frequency, but also because the greatest lethality of all drugs poisoning comes from them. [6] Yet, the most fatalities in the region comes from corrosives and pesticides. Drugs, corrosives and pesticides are the most common cause of poisoning due to the easy availability and low prices. Medications are different clinically presented and showed that people who used them for intoxication did not have serious suicidal intention. [7] Recurrent self-poisoning were registered as drug poisoning but also commonly found in poisoning with corrosives. [3] The incidence of serious intoxication attempt, which is labeled as the attempt of suicide was registered at an extremely large number of patients, as many as 33 (57.89%). After completing the treatment, all patients are recommended continued monitoring of the competence of the psychiatrist but only a small number of patients is rigid and adheres. Studies of the National Poisoning Control Center describe that 80% of patients fail to report for further psychiatric treatment. [3] Of 58 patients admitted for drugs poisoning at the Department of Toxicology, a high prevalence of psychiatric disorders were found in 57 patients (98.28%). Since a large number was diagnosed Tentamen Suicidi, most of them attributed to depressive syndrome (66.67%), but in our case schizophrenia and personality

disorders also. Dominant depressive episodes are in accordance with the findings of other authors (70.7%). [8,9] The importance of comorbidity for suicidal behavior is undeniable as evidenced by numerous studies by other authors, who concluded that the risk of suicide is 6 times higher in people with comorbidities compared to people who had only one psychiatric disorder. [10]

## CONCLUSION

Psychiatric disorders, including dominant affective, schizo-affective, anxiety-neurosis, psychoactive substance abuse, personality disorders, are very common in cases of deliberate drugs intoxication. The largest number of patients was registered with depressive syndrome of mild severity although other serious disorders were not rare. For these categories of patients comorbidities contribute to suicidal risk. Acute toxicity requires urgent care with adequate psychiatric approach. Yet, experience shows that despite the involvement of a large number of specialists in various fields, the percentage of recurrent poisoning remains high.

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## UČESTALOST PSIHIJATRIJSKIH POREMEĆAJA KOD TROVANJA LEKOVIMA NA ODELJENJU TOKSIKOLOGIJE KC NIŠ

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**Sažetak: Uvod:** Trovanja su vodeći uzrok mortaliteta, odmah iza povređivanja u saobraćajnim nesrećama. Kao značajni razlozi za namerna samotrovanja se izdvajaju psihijatrijski poremećaji.

**Cilj rada:** Ukazati na značaj, veličinu i učestalost psihijatrijskih poremećaja kod trovanja lekovima kroz jednogodišnju analizu hospitalizovanih pacijenata u Nišu.

**Metodologija:** Strukturirana jednogodišnja analiza hospitalizovanih pacijenata na Odeljenju Toksikologije KC Niš za 2013. Godinu uz korelaciju namernih trovanja lekovima sa psihijatrijskim poremećajima.

**Rezultati:** U toku 2013. godine na Odeljenju Toksikologije KC Niš evidentirano je 115 pacijenata. Po zastupljenosti na prvom mestu nalaze se pacijenti koji su koristili lekove, 58 (50,43%), a kod 57 je dijagnostikovao neki psihijatrijski poremećaj. Od psihijatrijskih poremećaja klasifikovanih po Međunarodnoj klasifikaciji bolesti, dominirali su afektivni poremećaji u 22 slučaja (38,6%), neurotski i stresni poremećaji u 14 slučaja (24,56%), zatim shizofrenija i shizoafektivni poremećaji u 10 slučaja (17,54%), poremećaji zbog korišćenja psihoaktivnih supstanci u 4 slučaja (7,02%), poremećaji ličnosti u 3 slučaja (5,26%), mentana retardacija u 2 slučaja (3,51%). Na kraju po jedan slučaj (1,75%) psihoorganskog sindroma i disocijativnog poremećaja ponašanja.

**Zaključak:** Psihijatrijski poremećaji su veoma česti u slučajevima namernog trovanja lekovima. Najveći broj pacijenata registrovan je sa depresivnim sindromom izraženog stepena, ali nisu retki bili i drugi teški poremećaji. Kod ovih kategorija bolesnika komorbiditet doprinosi suicidalnom riziku. Akutno trovanje zahteva urgentno zbrinjavanje sa adekvatnim psihijatrijskim pristupom. Iskustva ipak pokazuju da je i pored angažovanja velikog broja specijalista različitih profila, procenat recidivantnih trovanja i dalje visok.

**Ključne reči:** Trovanje lekovima, psihijatrijski poremećaji, učestalost

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