

Case Report

Alprazolam Poisoning

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Abstract

Alprazolam is a triazolo benzodiazepine which has antidepressant properties. It is a short acting anxiolytic of the benzodiazepine class of psychoactive drugs. Alprazolam like other benzodiazepines binds to specific sites on the gamma-amino-butyric acid (GABA) receptors. Its therapeutic index being high, it is generally considered a safe and effective drug for the treatment of anxiety disorders and panic attack. Alprazolam has since long been consumed as drug of abuse, however trend to use it for suicidal purpose is recently rising, in which easy availability of this drug plays a significant role. It is available for oral administration in compressed tablet and extended release capsule formulations.

We report one such case of alprazolam poisoning in which the drug was easily available. As is evident from this report documentation, inability to confront persistent domestic problems, and failure to achieve life's goals were the triggering factors in a middle aged female, to compel her to suicide with the help of alprazolam, which was available to her as prescribed by a physician for her ailment.

Key Words: Abuse, Availability, Psychotic, Triggering, Suicide

Introduction:

Alprazolam (8- chloro-1-methyl 6 phenyl -4H-s triazolo (4, 3-alpha) benzodiazepine, which is one of the most widely prescribed benzodiazepines in India. [1, 4] Alprazolam is commonly used and FDA approved for the medical treatment of panic disorder and anxiety disorders, such as generalized anxiety disorder (GAD) or social Anxiety disorder. [1, 2]

Case Report:

A 37 year old married female, with history of psychiatric problems, came to our emergency in unconscious state, with alleged history of ingestion of 60 tablets of alprazolam (Alprax- Rx) tablets 3 hour back, with the intention of suicide. The relatives of the patient showed us all the empty packs, containing the tablets, found near her body.

There were about 60, 1mg tablets of alprazolam that had been ingested by her.

Further, her relatives gave history that patient had been suffering from panic disorder, since last five years, for which she had been on medication off and on, as advised by a psychiatrist. Her medications included alprazolam and fluoxetine.

Off late, she was also under stress, as she could not conceive in last four years of her marriage, and was pursuing infertility treatments, without any success.

On general examination mild cyanosis and pallor was present. Patient's vitals on admission were as follows-- pulse -100/min feeble, blood pressure-80/mm hg systolic, respiratory rate 30/min regular, temperature - 36.8 C. Neurological examination showed deep coma, bilateral constricted pupils, which reacted minimally to light, diminished tendon reflexes and retention of urine, and plantar reflexes were not illicitable bilaterally. There was no response to painful stimuli.

Her Glasgow coma scale (GCS) was 3. Respiratory system examination was within normal limits. On cardiovascular system (CVS) examination tachycardia was noted, and ECG showed sinus tachycardia. Routine Biochemical and hematological tests were normal.

As suggested by the evidences above, probability diagnosis of alprazolam over dosage was made. Patient was admitted in ICU. A nasogastric tube was placed and catheterization was done. Patient's gastric lavage returned no pill fragments. She was urgently intubated and kept on mechanical ventilation with continuous oxygen administration and parenteral fluids. Rest of her treatment was symptomatic.

Flumazenil, which is the antidote of alprazolam poisoning, could not be used, as it was not available. Patient showed improvement after 10 hours and was extubated thereafter.

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She regained full consciousness in next 24 hours, and revealed that she had gained information about Alprazolam tablets being used as a suicidal agent, via internet. One mg tablets of this drug were already easily available to her, as a part of prescription from a psychiatrist for treatment of her panic disorder.

Thereby, she attempted suicide with the help of alprazolam tablets, out of frustration caused by her long strained marriage and infertility problems. There was no neurological sequelae, and she was discharged after 48 hours.

She was referred to an advanced infertility centre, to help her in conceiving early and successfully. We also recommended her to visit a psychiatrist for possible evaluation as well as counseling of her family problems. We advised her relatives, to give prescribed medications to her under their personal vigilance, and also provide moral support to her, to be able to deal with life's challenges.

Discussion:

Alprazolam possesses anxiolytic, sedative, hypnotic, skeletal muscle relaxant, anticonvulsant, and amnesic properties. [3]

It is an effective anxiolytic agent at doses of 0.75-4mg daily, and doses of 6-9 mg per day are prescribed to treat panic attack and panic disorders. [4] Following oral administration, it is rapidly absorbed with peak plasma concentration occurring 1-2 hours after ingestion. Alprazolam has a short duration of action with an average plasma half-life of 11 hours. [5] It is extensively metabolized by oxidation and conjugation with only 20% of the parent drug appearing unchanged in urine. [6]

Adverse reactions to alprazolam are typically, observed at the beginning of therapy and diminish under continued treatment. The most common effects reports are drowsiness and fatigue. Other adverse reactions include confusion, headache, nausea and vomiting, tachycardia, hypotension and blurred vision. [4]

There are only two reports of fatal intoxications that were due to the ingestion of alprazolam documented in the literature.

Edinboro and Backer [7] reported a blood Alprazolam concentration of 0.177 mg/L in an ante-mortem hospital admission specimen from a depressed and suicidal woman. In another study, Stafford et al [8] reported a postmortem blood alprazolam concentration of

0.122 mg/L in an acute alprazolam intoxication with concomitant ingestion of ethanol (postmortem blood alcohol concentration = 0.15g/dl).

Conclusion:

Poisoning due to alprazolam is associated with very minimal mortality. Psychotic patients of panic disorders, chronic depression, general anxiety disorders, etc are prone to commit suicide.

Alprazolam, being easily available, to them in their medication, plays a significant role in meeting their suicidal intent. Patients of alprazolam poisoning can be successfully managed even with non-availability of its antidote, flumazenil.

In recent times, television channels depicting graphic content in movies, serials, or news contributes to the misuse of this drug. Also, easy access to virtually all knowledge, including medical information, by means of internet, is sometimes hazardous, as was in this case.

Drug abuse of alprazolam is preventable by exercising strict control over its easy availability, at the distributor's end and raising media awareness about the negative depiction of alprazolam being used as suicidal agent.

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