1 INTRODUCTION

Lysergic acid diethylamide (LSD) is a potent hallucinogenic drug that affects the mood and perception of an individual. However, LSD-induced self-inflicted cut-throat wounds and self-harm injuries are extremely rare. In this study, we report the first suicide case of a 24-year-old young man with self-induced cut-throat wound LSD intoxication in Bangladesh.

Lysergic acid diethylamide (LSD) has been revealed as a typical hallucinogenic drug, consisting of d-lysergic acid diethylamide, psilocybin, and dimethyltryptamine, that acts on serotonin (5-HT2A) receptors. It has been utilized for several purposes such as recreational, spiritual, and therapeutic.1 The intense hallucinogenic properties of LSD were accidentally discovered in 1943.2 It has got some therapeutic attention and been used as a treatment option in neurosis, obsessive-compulsive disorder, drug abuse, and end-stage life treatment care during the mid-1950s and mid-1970s.3 A recent study suggested that psilocybin has an effect on positive characteristics like sensitivity, mindset, social effects, affect, life satisfaction, behavior, and associated jointly alternative trait openness in healthy people until 14 months after an intake of LSD.1 It transiently produces a dose-dependent discrete profound alteration in the feel of self that includes a loosening of self-boundaries, a kingdom of oneness with the outside world, and modifications in meaning processing and self-association.4 Classic hallucinogens have posed the users to experience images, sounds, and perceive sensations that appear to be real, however, do not exist. The effects typically start within 20 to 90 min and might last as long as 12 h in some cases of LSD or as short as quarter-hour in others. The psychoactive drug users talk over the experiences brought on by these substances as “trips.” If the experience is unpleasant, consumers generally identify it as a “bad trip.” In addition to the mental state symptoms, some short-term general effects, such as tachycardia, vomiting, euphoria, and synesthesia, alter time sense (i.e., the experience that time is moving lazily), hypertension, tachypnea, increased body temperature, anorexia, dry mouth, ataxia, hyperhidrosis, nervousness,
paranoia, and psychosis, and peculiar behaviors like suicide, homicide, and convulsions have been experienced.\(^5,6\) It has also some long-term effects such as persistent psychosis, disorganized thinking, paranoia, and hallucinogen persisting perception disorder, albeit those long-term effects are very rarely seen.\(^5,6\)

Bangladesh is a South Asian country with about a population of 160 million located in a focal point of global growing narcotic zones, that is, the “golden crescent” and the “golden triangle.” Recent studies identified that heroin and yaba (amphetamine) are the most abused substances in the country.\(^7\) No previous report of suicide under the influence of LSD was identified in the country. On this background, hereby we aimed to report the very first case of suicide under the influence of LSD in Bangladesh.

2 | CASE PRESENTATION

An unidentified dead body of a 24-year-old young man was kept in the Dhaka Medical College mortuary that was identified after about a week.\(^8\) The person was brought by police with a deep cut-throat wound of 5-inch length and 2 inches wide approximately (Figure 1) and died at the emergency department on May 15, 2021. Hypovolemic shock resulting from excessive blood loss from the cut-throat wound was mentioned as the cause of death in the death certificate. The police inquest stated that on the day of the event, the person took a heavy sharp cutting weapon (machete: locally called Da) from a street coconut seller and cut his own throat. With the cut injury, he was running to and fro while he was bleeding. Then, the street people called the police who admitted him to the hospital.

After the identification, police investigated the case and identified that the person along with some of his friends took LSD before the event. The chemical analysis report of his visceral report confirmed that LSD was found in his body after the autopsy. The manner of death was opined as suicidal based on the police inquiry, nature of cut mark, autopsy findings, and the presence of LSD in viscera by chemical analysis in the dead body.

The person was a university student and lived in the university hall that was away from his home. The family members were totally unaware of any history of any sort of substance abuse till his missing and death. Additionally, the family members could not mention any history of psychiatric illness and/or previous suicidal attempts.

3 | DISCUSSION

We present here the first case of self-induced cut-throat wounds under the impact of LSD in Bangladesh. The case also revealed some important aspects in the country such as the use of LSD has widely come into the surface the first time in the country as a psychoactive substance, and the law enforcing authority was unable to identify the dead body for about 8 days. The detailed investigation of police revealed that LSD has been used since 2017 in Bangladesh, which was transported from European countries through courier services or in luggage and distributed in the secret Facebook groups comprising over a thousand members of young university students.\(^8\) It opens an important area of concern that law enforcement agencies should be aware of the pattern to stop the malaise. Second, the dead body was in the morgue in an unidentified status for about a week while the law enforcing agency and the morgue authority were involved with it. In this case, fingerprints and the national database of the country could be utilized urgently to identify the dead bodies.

The reported person had symptoms of self-aggression and undue sudden severe guilt, and suddenly he inflicted his own neck multiple times by a heavy sharp cutting weapon while he was LSD intoxicated. Isolated LSD-induced self-inflicted injuries are extremely rare without any psychotic disorders. A similar kind of case

FIGURE 1 Transverse cut-throat wound with hesitation cuts, damage in carotid vessels, and neck structure
was reported previously mentioning a self-inflicted neck injury under the influence of it. A literature reported four cases of severe self-induced wounds (3 enucleations and 1 emasculaton) associated with LSD exposure.

Another report mentioned a 20-year-old undergraduate male student who jumped from a height under the influence the LSD without any history of severe psychopathology. An 18-year-old college student had a nonfatal attempt under LSD without any psychopathology. A dataset of more than 19,000 samples from the United States reported no relationship between lifetime consumption of psychedelics and increased rate of past year severe psychopathology (especially distress, and depressive and anxiety disorder), consumption of mental health services, and suicidal behaviors. A hallucinogen persisting perception disorder (HPPD) was reported after 10 years of taking LSD with severe psychopathology, war exposer, and previous suicidal behavior. However, a recent systematic review assessing the relationship between psychedelics and suicidality found positive, negative, and mixed findings. Therefore, further evidence is needed to find out the cause and effect association (if any).

Although this case has brought some new aspects and challenges of forensic medicine and psychiatry, some important issues should be considered while generalizing the findings. First, LSD-induced suicidal behavior is extremely rare, and the cause-effect association has not been clearly identified. Second, we could not explore the detailed substance abuse and psychosocial history of the person due to the unavailability of a reliable informant.

4 | CONCLUSIONS

This case revealed several areas of forensic medicine, psychiatry, and law enforcement agencies in Bangladesh such as silent recreational use of LSD, suicide under LSD intoxication, and identification of dead bodies in the morgue. Although evidence supporting the harmful effect of LSD needs further replications, there are some reports showing that LSD provokes self-aggregation, self-harm, and suicide.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest to the report.

AUTHOR CONTRIBUTIONS

PKB contributed to conception, data collection, and review. DR and PB contributed to data collection and review. SMYA contributed to conception and writing.

ETHICAL APPROVAL

This case has been reported anonymously, and data were collected from publicly available domains and field experts. Informed written consent was obtained from one of the family members (who was involved in the processes during the postmortem) to publish this anonymous case report.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

ORCID

S. M. Yasir Arafat DOI: https://orcid.org/0000-0003-0521-5708

REFERENCES

1. Schmid Y, Liechti ME. Long-lasting subjective effects of LSD in normal subjects. Psychopharmacology. 2018;235(2):535-545.
2. Nichols DE, Grob CS. Is LSD toxic? Forensic Sci Int. 2018;284:141-145.
3. European Monitoring Centre for Drugs and Drug Addiction. Lysergide (LSD) drug profile. http://www.emcdda.europa.eu/publications/drug-profiles/lsd (accessed on September 20, 2021).
4. Preller KH, Schilbach L, Pokorny T, Flemming J, Seifritz E, Vollenweider FX. Role of the 5-HT1A receptor in self- and other-initiated social interaction in lysergic acid diethylamide-induced states: a pharmacological fMRI study. J Neurosci. 2018;38(14):3603-3611.
5. NIDA. "Hallucinogens Drug Facts." National Institute on Drug Abuse, 22 Apr. 2019, https://www.drugabuse.gov/publications/drugfacts/hallucinogens Accessed 17 Jun. 2021.
6. Smart RG, Bateman K. Unfavourable reactions to LSD: a review and analysis of the available case reports. Can Med Assoc J. 1967;97(20):1214-1221.
7. Kamal M, Huk N, Mali B, Akter H, Arafat SMY. Epidemiology of substance abuse in Bangladesh: a narrative review. J Ment Disord Treat. 2018;4(165):2471.
8. Dhaka Tribune. Police: LSD seized during probe into DU student's death (https://www.dhakatribune.com/bangladesh/dhaka/2021/05/27/police-lsd-seized-during-probe-over-du-student-s-death) (accessed on September 20, 2021).
9. Le Daré B, Gicquel T, Baert A, Morel I, Bouvet R. Self-inflicted neck wounds under influence of lysergic acid diethylamide: a case report and literature review. Medicine (Baltimore). 2020;99(27):e20868.
10. Tuwir I, Chako E, Brosnahan D, Cassidy L. Drug induced autonucleation with resultant chiasmal damage. Br J Ophthalmol. 2005;89(1):121.
11. Keeler MH, Reifler CB. Suicide during an LSD reaction. Am J Psychiatry. 1967;123(7):884-885.
12. Suzuki J, Poklis JL, Poklis A. “My Friend Said it was Good LSD”: a suicide attempt following analytically confirmed 25I-NBOMe ingestion. J Psychoactive Drugs. 2014;46(3):379-382.
13. Johansen P-Ø, Krebs TS. Psychedelics not linked to mental health problems or suicidal behavior: a population study. J Psychopharmacol. 2015;29(3):270-279.

14. Brodrick J, Mitchell BG. Hallucinogen persisting perception disorder and risk of suicide. J Pharm Pract. 2016;29(4):431-434.

15. Zeifman RJ, Singhal N, Breslow L, Weissman CR. On the relationship between classic psychedelics and suicidality: a systematic review. ACS Pharmacol Transl. 2021;4(2):436-451.

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