

Case Report

Psychotropic Drug Overdose: The Death of the Hollywood Celebrity Heath Ledger

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ABSTRACT

Introduction: The celebrated Hollywood actor Heath Ledger- famous for the role of “Joker” in the movie “The dark night” died due to accidental drug overdose. In this article we will review the causes and events related to his death and how the similar accidents could be prevented in the near future.

Method: Literature search in various databases and journals and many news websites was performed.

Result: Heath Ledger was suffering from major depression, anxiety, drug addiction, relationship problems bipolar like symptoms and childhood mental trauma. He died due to accidental drug overdose in 2008. All these factors could possibly be the reason for his sudden tragic death or it could simply be the use of multiple drugs at the same

time that lead to his demise. Appropriate measures should be taken by physicians and psychiatrists- when dealing with the patients with the above mentioned problems as early as possible to avoid this kind of accidental or deliberate overdose related deaths.

Conclusion: Deaths related to psychotropic or opioid drug overdose could be accidental or a deliberate suicide. Various measures have been taken in the recent past to save many psychiatric patients from being overdosed yet the rate of drug overdose related deaths has not been reduced. Future research will help in reducing this rate and save many lives.

Keywords: Drug overdose; Trauma; Psychotropic; Opioid drug

Introduction

The United States is in the midst of an unprecedented drug overdose epidemic [1]. Prescription drug overdose can be accidental overuse or intentional misuse. They occur when the person exceeds the medically recommended dose. Drug overdose was the leading cause of injury death in 2013. Among people 25 to 64 years old, drug overdose caused more deaths than motor vehicle traffic crashes [2]. There were 43,982 drug overdose deaths in the United States in 2013. Of these, 22,767 (51.8%) were related to prescription drugs. Out of these 16,235 (71.3%) involved opioid painkillers and 6,973 (30.6%) involved benzodiazepines. People who died of drug overdoses often had a combination of benzodiazepines and opioid painkillers in their bodies [3].

According to a survey of the total number of US overdose deaths involving prescription drugs including anti-depressants, barbiturates, benzodiazepines and opioids. From 2001 to 2013 that there was a 2.5-fold increase in drug overdose related deaths. The same survey highlighted the fact that there was a 3-fold increase in the total number of deaths involving opioid pain relievers like methadone, synthetic narcotics and other opioids from the year 2001-2013. On the other hand a 4-fold increase in the total number of deaths involving benzodiazepines from 2001 to 2013 in both males and females was observed [4]. Deaths due to drug overdose are also prevalent in other parts of the world with overdoses mostly used as a mode of suicide [5]. In the US and Australia, tricyclic antidepressants (TCAs),

benzodiazepines (BDZs), cocaine alcohol and amphetamine are the most common overdosed drugs [6-8]. While in Canada, psychotropic drugs, over-the-counter (OTC) medications and other prescription drugs were overdosed for the purpose of suicide [9]. On the other hand, drugs commonly overdosed in United Kingdom (England and Wales) for the same purpose included pain killers, antidepressants, alcohol and sedative-hypnotics [10]. With psychotropic drugs remains the most commonly overdosed drug.

On the January 22nd 2008, shocking news stunned the movie fans all over the world when the famous Australian born Hollywood actor Heath Ledger died due to drug overdose. According to various sources the death was due to prescription overdose. Many celebrities have died due to drug over dose and other mental health related problems in the past decade [11]. In this article we will discuss about the causes and events of his tragic death and the main reason behind his accidental death. Studies like these will help us better understand why we hear these tragic news too often. We also believe scientific papers like these will help us avoid the similar incidents in the coming future and save many lives.

Discussion

Heath Ledger's early life

The devastating death of the Hollywood actor Heath Ledger highlighted the deleterious and fatal effects of prescription drug overdose and garnered a lot of media attention. Heath Ledger

died accidentally “from the abuse of prescription medications” — specifically, six kinds of painkillers, sleeping pills and anti-anxiety drugs [12].

Ledger was born on 4 April 1979 in Perth, Western Australia, the son of Sally and Kim Ledger [13]. He went to Mary's Mount Primary School in Goosebury Hills [14] and later Guildford Grammar School, where he had his first acting experiences, starring in a school production as Peter Pan at age 10. His parents separated and later got divorced when he was 11 [15]. At age 17 Ledger left school to pursue an acting career [15]. He performed roles in Australian television and film during the 1990s. In 1998, he left for the United States to develop his film career.

Ledger was awarded "Best Actor of 2005" from both the New York film critics Circle and the San Francisco film critics circle for his performance in *Brokeback Mountain* [16]. In 2004, he started dating actress Michelle Williams on the set of *Brokeback Mountain*. Their daughter, Matilda Rose, was born on the October 28th 2005 in New York [17].

Ledger died on January 22nd 2008 [18,19] as a result of accidental intoxication from prescription drugs [20]. Just a few months before his death, Ledger had winded – up filming his world renowned performance as the Joker in *The Dark Knight*. His death took place during editing of *The Dark Knight* and in the midst of filming his last role as Tony in *The Imaginarium of Doctor Parnassus*.

In a New York times interview, which was published on the November 4th 2007, Heath ledger disclosed that he had some trouble sleeping after his recently completed roles in *I'm not there* and *The dark knight*. On another occasion he said, "Last week I probably slept an average of two hours a night...I couldn't stop thinking. My body was exhausted, and my mind was still going" [20]. This point towards racing thoughts with insomnia, both of which could be the symptoms of bipolar disorder. However he never declared if he was diagnosed with bipolar. He further disclosed about his medication intake in the in New York times interview and said that he had taken two Ambien pills, after taking just one had not sufficed and those left him in "a stupor, only to wake up an hour later, his mind still racing" [21]. His former fiancée and actor Michelle Williams said about Ledger, "For as long as I'd known him, he had bouts with insomnia. He had too much energy. His mind was turning, turning turning – always turning" [22-24]. He had Anxiety and depression [25]. He also spent some days at a drug rehabilitation clinic, due to his heroin addiction, after his break-up with Michelle [26].

Before returning to New York from his last film assignment, in London, in January 2008, Ledger was apparently suffering from some kind of respiratory illness, which he repeatedly complained to his co-star from *The Imaginarium of Doctor Parnassus*, Christopher Plummer that he was having difficulty sleeping and took pills to help with that problem. Plummer says, 'we all caught colds because we were shooting outside on horrible, damp nights. But Heath's went on and I don't think he dealt with it immediately with the antibiotics.... I think what he did have been the walking pneumonia.' On top of that, 'He was saying all the time, 'dammit, I can't sleep' ...and he was taking all these pills to help him' [27].

The tragic death

On the January 22nd 2008, at about 2:45 pm (EST), Ledger

was found unconscious in his bed by his housekeeper, Teresa Solomon, and his masseuse, Diana Wolozin, in his apartment at 421 Broome Street in the SoHo neighborhood of Manhattan [28]. According to the police, his masseuse who had arrived early for a 3:00 pm appointment with Ledger, called Ledger's friend Mary Kate Olsen for help. Olsen, who was in California at that time, directed a New York City private security guard to go to his apartment. At 3:26 pm, "less than 15 min after she first saw him in bed and only a few moments after the first call to Ms. Olsen", Wolozin called 911 "to say that Mr. Ledger was not breathing". The 911 operator advised, Wolozin to perform CPR, which was unsuccessful [29]. Seven minutes later the Paramedics and emergency medical technicians arrived, at 3:33 pm but were also unable to revive him. At 3:36 pm, Ledger was pronounced dead, and his body was removed from the apartment [30].

The actual cause

On the February 6th 2008, the Office of the chief Medical officer New York released its conclusions along with a complete toxicological analysis. The report concluded that "Mr. Heath Ledger died as the result of acute intoxication by the combined effects of oxycodone, hydrocodon, diazepam, temazepam, alprazolam and doxylamine." It states definitively: "We have concluded that the manner of death is accident, resulting from the abuse of prescribed medications" [31].

The above case study shows that the famous actor Heath Ledger had faced multiple life problems. Early in his life his parents were separated, later he himself had relationship troubles. This further triggered his heroin addiction, anxiety and major depression. In addition to these problems he also had bipolar like symptoms. All of these problems are considered to be the risk factors for suicide [32-36].

However, the autopsy reports didn't provide any hint toward a suicide. Because these factors are considered as risk factors for suicide, we believe more research is needed to know what exactly lead to his tragic death. The autopsy reports claimed it was an accidental death, due to drug overdose. If we assume the autopsy reports to be true, it points towards another possibility that probably these above mentioned problems are associated with accidental over dose death as well. Future research will uncover any such association.

Risk factors for drug overdose include, obtaining overlapping prescriptions from multiple providers and pharmacies [37-40]. Taking high daily dosages of prescription painkillers [41-43] having mental illness or a history of alcohol or other substance abuse [44]. Of these risk factors for drug overdose deaths, Ledger had mental illness (major depression, anxiety and bipolar mimicking symptoms). In addition he was also addicted to heroin, which further aggravated his chances of either committing a suicide or dying due to an accidental drug overdose.

Despite knowing the risk factors, and many appropriate measures these kinds of tragic accidents have not been totally prevented. Research suggests that most people dying accidentally or deliberately due to drug overdose are suffering from psychiatric problems. Ledger surely was suffering from 3 major psychiatric problems, major depression, anxiety and drug abuse, could also be a fourth one which was an undiagnosed

bipolar disorder. In addition, childhood troubles, personal relationship problems and insomnia probably further triggered these problems.

Drug overdose is the most frequent cause of death among people, who misuse illegal drugs [45]. Moreover, it has become a medical dilemma in the recent times. Many people including famous celebrities and well known people have died due to the drug overdose. Cases like the one mentioned above are commonly observed almost every year, throughout the world. Most of the times, the person dying of drug overdose, is taking either opioids or psychiatric medications [46]. Because the psychiatric problems like major depression have a potential to trigger many other bodily problems [47], these disorders can be far more stressful for the person and can be major contributing factors to suicide. The most commonly used drugs for suicide include antidepressants, like TCAs and sedative-hypnotics [10,48-52].

In terms of suicide attempters, who used psychotropic medicines as a mode of suicide by overdose, the research shows that women who have psychiatric illnesses attempted suicide in less risky manner characterized by non-severe medical problem. This point toward a notion that some patients who attempt suicide do not intend to commit suicide [53]. People committing suicide who had psychotropic medication overdose are mostly women, have some kind of psychiatric problem in the past and may have a history of previous one or more suicide attempts. Therefore, a proper screening for suicidal ideation is imperative in the psychiatric patients before prescribing any psychotropic medication, because psychiatric disorders are major risk factors for suicide and these drugs are used as a mode of suicide via drug overdose [5].

Besides psychotropic drugs, opioids are also very commonly used prescription medication used as a tool for drug overdose and over dose related suicide. In order to control this situation, opioid-prescribing policies have been brought to surface because of the efforts at the federal and state governmental level, to decrease these kinds of accidents. Even an accidental non-compliance with opioid prescribing laws and policies may put a physician or psychiatrist at risk for losing practice licensure. Complete and thorough documented record of prescription decisions and assessment and follow-up of patients at risk for opioid misuse. Prescription monitoring databases and urine drug screening are used to check for patient adherence to the prescribed regimen [52].

Similar measures have been taken in the form of a program in New York State prisons; to save prisoners from the increased risks of drug overdose death. The program involves, training the prisoners in overdose prevention and increase the availability of naloxone [54]. In order to increase the ordinary people's access to naloxone, forty three (43) states and the District of Columbia have passed certain laws. These laws will hopefully be helpful in reducing death and harmful effect of drug overdose. However, the cost of the drug and its prescription status still makes it difficult for a layman to have the access to naloxone [55].

Heath Ledger is no more with us and died most probably due to an accidental drug overdose. However, he leaves behind him a challenging question about how to prevent the accidental and suicidal deaths associated with the drug overdose. All the

previous measures taken at the federal and the state government level have not been hundred percent successful. Yet we expect that a better solution of this problem will come to surface in the next few years to come.

Conclusion

The above case study and the discussion conclude that many psychiatric patients are at risk of drug overdose. Either this over dose is an attempted suicide or it is a non-serious attempt of suicide with no real intentions or it could just be a simple accidental overdose due to any reason.

It is apparent that people dying due to overdose with or without the suicidal intention are suffering from psychiatric problems or some kind of psychological or psychiatric trauma in the past or probably are in a desperate need of mental help just like we saw in the case of the celebrated actor Heath Ledger. Ledger had anxiety, major depression, drug addiction, bipolar like symptoms and he had childhood mental trauma like parental divorce. If these psychiatric traumas or psychological problems are addressed properly in time, many of the patients will not be required to use too many medications. Moreover, anyone with childhood trauma or psychological issues like parental divorce, should go through some psychiatric and psychologist's appointment at regular basis in order to take good care of their mental health as early in their lives as possible. Ignoring such kinds of problems could lead to suicide or accidental overdose [11]. Several other factors also play an important role in accidental overdose like forgetting to take the daily required dose. These kinds of issues could be resolved by proper counselling and a medication diary where the patient records his daily medication intake. Some electronic medication pill boxes have recently been introduced to address the same problem. Therefore, the people suffering from any psychiatric illness irrespective of the intensity should be encouraged to see a psychiatrist or a drug abuse counselor and these cases should not be taken lightly by the psychiatrists/counselor and the family physician in order to prevent such disastrous accidents. Many measures have been taken to avoid such incidents, yet the death rate due to drug overdose still remains the same. Thus, more research needs to be conducted about how to prevent this preventable cause of death, which is one of the leading causes of death in the United States and worldwide.

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Submitted: February 09, 2017; Accepted: February 20, 2017; Published: February 27, 2017