



Pathology/Biology Section - 2013

G93 Suicides Due to Substance Overdose in Tarrant County, Texas

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After attending this presentation, attendees will learn the incidence of suicides due to substance overdose in Tarrant County, Texas, from January of 2006 to December of 2010, and its comparison to larger studies.

This presentation will impact the forensic science community by increasing awareness that prescription drugs are the leading substance type used among individuals who died by suicide due to substance overdose and that cautious prescribing practices are essential.

Introduction: Suicide is the 11th leading cause of death of all ages in the United States and more than 34,000 people end their lives every year. Suicide is found in every age, racial, and ethnic group. Center for Disease Control and Prevention (CDC) reports that substance overdose is the third-leading method of suicide, following firearm and hanging/strangulation. The vast majority of substance overdose suicides are related to prescription drugs. The purpose of this study was to summarize and demonstrate the characteristics of suicide deaths due to substance overdose in Tarrant County, Texas.

Material and Methods: This study included all suicide cases due to substance overdose in Tarrant County, Texas, from January of 2006 to December of 2010. Data were collected from the Tarrant County Medical Examiner Office records retrospectively. The substance was grouped into prescription drugs (benzodiazepines, opioid analgesics, antidepressants, and others), over-the-counter drugs, illicit drugs, ethanol, and other substances. The data were analyzed according to the age group, gender, race, and numbers and types of drugs.

Results: There were 90 eligible suicide cases (48 males, 42 females) due to substance overdose out of 733 substance-related deaths. The eligible cases represent 10% of all suicide cases (90 out of 891) during the same period. The majority of cases were Caucasians. The highest suicide rate (37%) was observed between ages 45 and 54, with the most cases (78%) falling between ages 25 and 54. Prescription drugs (75%) were the leading substance type used, with antidepressants the most popular. Thirty-eight percent ingested only one type of substance and 62% ingested two or more types of substances. There was no considerable difference between males and females in a total number of the suicide cases; however, the majority (79%) of females, compared to about half (48%) of males, ingested more than one type of substance.

Conclusions and Discussions: Suicide is a serious public health concern and substance overdose accounts for numbers of suicides. This study demonstrates an increasing problem with suicide deaths due to fatal overdose of prescription drugs in Tarrant County, Texas, a finding similar to other larger studies. However, more individuals (62%) ingested two or more types of substances in Tarrant County compared to a recent CDC report (25%). Many of these deaths can be prevented by controlling access to poisonous substances, and many of the substances used in suicides are commonly prescribed. Physicians and other clinicians should strictly follow guidelines for prescribing drugs with a high abuse potential. Surveillance systems designed to prevent illicit use of prescription drugs need to be implemented. Effective drug therapy is necessary for physical and mental health conditions; however, health care providers, patients, and their family members should be aware of the associated risk these substances pose.

Drugs, Overdose, Suicide