



Pathology Biology Section - 2012

G130 Complicated Suicide Versus Autoeroticism? A Case Involving Multiple Drugs and a Porta-Potty

Evan M. Dickerson, BA, 6275 North Meridian Street, Indianapolis, IN 46260; Prentiss Jones, PhD, South Bend Medical Foundation, 530 North Lafayette Boulevard, South Bend, IN 46601; Dennis Wilkins, and Janis Regnier, Portage Police Department, 2693 Irving Street #P, Portage, IN 46368; and Joseph A. Prahlow, MD, South Bend Medical Foundation, 530 North Lafayette Boulevard, South Bend, IN 46601*

After attending this presentation, attendees will appreciate a bizarre circumstance of suicide that initially masks itself as a homicide. Moreover, attendees will learn to recognize alternative behavioral practices associated with paraphilias and transvestism that may be present at the scene of a death.

This presentation will impact the forensic science community by presenting a unique and bizarre case of a suicide in a porta-potty. The necessity of thorough investigation including autopsy is emphasized whenever scene investigation suggests the possibility of homicide. Careful correlation of autopsy findings and death scene investigation are essential in determining how a death may have occurred. Moreover, toxicology findings can provide abundant evidence regarding not only the cause of death but also the manner of death. In the current case, the extremely high level of tramadol in combination with amphetamine provides a tremendous amount of evidence for suicidal overdose.

Suicides can mimic homicide until further investigation and pathology are reviewed. In this report, a unique case of suicide by drug overdose with possible contributing factors of positional asphyxia, hyperthermia, and exposure to the chemical contents of a "porta-potty" is described.

A 36-year-old male was found dead in the waste receptacle of a porta-potty in a park on a late afternoon of a hot August day. Police were notified of an abandoned vehicle in the parking lot adjacent to a local park. The interior and exterior of the vehicle were covered with hand-drawn graphic images and writings alluding to the male genitalia and homosexual acts. The vehicle contained several articles of clothing and an open gym bag. The bag contained personal lubricant amongst other items. The driver's seat contained several tubes of lipstick that matched the color of writing on the car. The decedent was found in the tank of the portable toilet at the edge of the parking lot. The decedent's leather jacket, vehicle keys, and additional tubes of lipstick were found inside the porta-potty.

Scene investigation revealed an obese man lying in the fetal position within the tank of a porta-potty. The decedent was noted to be shirtless, wearing only women's stockings. To allow for further investigation and autopsy, the body was extricated from the basin of the toilet by cutting the top portion of the tank off.

At autopsy, the approximately 100kg decedent was noted to have early signs of decomposition, including skin discoloration, slippage, and bloating. He was wearing women's makeup, a pair of nylon leggings, and a left nylon sock. The body exhibited blue debris and had a chemical smell. The flanks, back, and arms showed confluent linear abrasions. Multiple apparent chemical burns overlapped the abrasions. The lesions were dry, thickened, and firm.

On internal examination, the abdominal organs showed signs of decompositional change but few other abnormalities. The stomach contained approximately 150ml of brown, viscous fluid which contained at least three capsules exuding a viscous material. A battery-operated vibrating device was present within the rectum.

Urine, serum, bile, and vitreous fluid samples were submitted for toxicological testing. The urine drug screen was positive for amphetamine, tramadol, methylphenidate, nicotine, cotinine, and caffeine. Serum drug testing revealed the presence of ethanol (50mg/dL), formic acid (45mg/L), tramadol (140mg/L), O-desmethyltramadol, methylphenidate, ritalinic acid, and-amphetamine (13.5mg/L).

Subsequent police investigation failed to reveal any evidence that suggested someone other than the decedent was involved in this death. Family members denied knowledge of homosexual tendencies, as well as suicidal ideation. Nevertheless, DNA analysis was run on several samples collected from the obtained lipstick, swabs of the porta-potty, and body swabs; the results proved to match the DNA of the decedent.

Based on the autopsy findings, as well as the historical and investigative information surrounding the case, the cause of death was listed as the combined toxic effects of formaldehyde, amphetamine, and tramadol with possible contributing factors of positional asphyxia and hyperthermia. The manner of death was ruled "suicide."

Cases of suicides can mimic homicide upon initial investigation.¹ Nevertheless, the unique presentation of this case is of importance. An exhaustive literature/media search was unable to obtain a similar case. Cases of individuals getting trapped in the basins of chemical toilets have been reported in the media, but none resulted in fatality.^{2,3} Provided with the immediate evidence, homicide must be suspected. Furthermore, it is possible to conceive that a "hate-crime" against an individual who practices alternative sexual lifestyles occurred.

The results of police investigation, autopsy, and toxicology indicated otherwise. The pattern of the flank and other abrasions was isolated to the area of central obesity, indicating a methodic approach to minimize injury when entering the relatively small opening within the toilet seat. No other evidence of trauma was present at autopsy. Ultimately, the habitus of the man would likely have prevented an assailant from forcing the body through the opening without excessive trauma being incurred (or the assailant simply giving-up because of the difficult task at-hand).



It is important to note the bizarre circumstances surrounding the decedent's death. Paraphilias are occasionally described in the forensic literature and may be evident at scenes of suicide.⁴ Although the family reported no known history of cross-dressing, it is likely that the decedent had a history of partaking in practices of transvestitism, as he was found with an anal vibrator while wearing women's clothing and make-up, indicating a level of sexual arousal associated with the act.

The primary component of many chemical toilets, including the one in this case, is formaldehyde.⁵ At autopsy, firm, chemical burns were noted over several parts of the body. The skin hardening was essentially due to the fixing of the tissue. The primary metabolite of formaldehyde, formic acid, provides an additional mechanism of injury in cases of formaldehyde exposure. Upon absorption into the blood, formaldehyde is rapidly metabolized to formic acid. Normal formic acid levels range between 0 to 12mg/L. The decedent's formic acid level was 45mg/L, well above the normal range, indicating systemic absorption of formaldehyde had occurred.

Fatal outcomes attributed solely to amphetamine have been observed in a wide range of blood amphetamine concentrations. In a review of 17 fatalities attributed solely to amphetamine, the peripheral blood concentration ranged from 1.1 to 7.4mg/L.⁶ Therefore, the high concentration of amphetamine (13.5mg/L) reported herein is remarkable.

Tramadol is a synthetic analog of codeine that possesses opiate-like properties; however, tramadol is not derived from an opiate. Although fatal intoxication with tramadol is rare, several cases have been previously reported.^{7,8} The highest reported blood tramadol level for cases of Tramadol intoxication alone was reported to be 15.1mg/L.⁷ In a separate case of multiple drug intoxication, the highest reported blood tramadol level was 38.3mg/L,⁹ at least 100 times the therapeutic range of 0.1 to 0.3mg/L.^{7,10,11} The decedent reported in this case had a tramadol level of 140mg/L, which is approximately 470 times the therapeutic range. In no other case could such a level of tramadol be found in the literature.

With no anatomic explanation for death but a sufficient toxicological explanation, it would be reasonable to rule this death as simply being due to the combined toxic effects of the several drugs and toxins identified. However, because of the unique body position and the history of an extremely hot outdoor environmental temperature, positional asphyxia and hyperthermia are potential contributing factors in this death.

In a "complex suicide," more than one mechanism is applied resulting in death.¹² The case presented exhibits multiple factors contributing to the decedent's suicide; however, the secondary insult resulting from the constraints of the toilet basin, heat, and chemical contents of the toilet were possibly unintentional mechanisms contributing to death. Therefore, the suicide more likely represents a "complicated suicide" – the initial insult resulting in suicide (the substances ingested) allows for a secondary insult that was not originally planned as part of the suicide.¹²

The current case is of interest to the forensic community for a variety of reasons. The case emphasizes the importance for forensic investigators and police to be aware of unorthodox practices and paraphilias. The bizarre practices of the decedent in this case produced a scene that suggested the possibility of a homicide. Whenever scene investigation suggests the possibility of a homicide, it is imperative that a thorough investigation be performed, including the performance of an autopsy. Careful correlation of autopsy findings and death scene investigation are essential in determining how a death may have occurred. Accurate toxicology findings can provide abundant evidence regarding not only the cause of death but also the manner of death. In the current case, the extremely high level of tramadol in combination with amphetamine provides a tremendous amount of evidence for suicidal overdose.

References:

1. Prahlow, J.A., S. Long, and J.J. Barnard, *A suicide disguised as a homicide: return to Thor Bridge*. Am J Forensic Med Pathol, 1998. **19**(2): p. 186-9.
2. *Stabbing suspect found in hole of Port-A-Potty*. [Online News Article] 2010 5/1/2010 [cited 2011 1/26/2011]; Available from: http://www.seattlepi.com/local/419320_potty30.html.
3. wpmt, *Man Gets Drunk, Nude, and Stuck in a Port-a-Potty*. 2008: Lebanon.
4. Prahlow, J.A., *Suicide by intrarectal gunshot wound*. Am J Forensic Med Pathol, 1998. **19**(4): p. 356-61.
5. *Safe-T-Fresh Deodorizers - Protection That Pays*. [cited 2011; Available from: <http://www.safetfresh.com/deodorizers/liquid-deodorizers/fresh-form.php>.
6. Baselt, R.C., Ed. *Disposition of Toxic Drugs and Chemicals in Man*, 7th ed. Biochemical Publications, Foster City, CA, 2004. p. 66-69.
7. De Decker, K., et al., *Fatal intoxication due to tramadol alone: case report and review of the literature*, in *Forensic Sci Int*. 2008; Ireland. p. 79-82.
8. Lusthof, K.J., and Zweipfening, G.M., *Suicide by Tramadol Overdose*. J. Anal. Toxicol. 22: 260 (1998).
9. Mangin, K.M., et al., *Fatal overdose of tramadol and alprazolam*. Forensic Science International. **105**.
10. H.B. Gutstein, H.A., *Opioid analgesics*, in *Goodman & Gilman's The Pharmacological Basis of Therapeutics*, L.E.L. J.G. Hardman, Editor. 2001, McGraw-Hill: New York. p. 596-620.
11. Musshoff, F. and B. Madea, *Fatality due to ingestion of tramadol alone*, in *Forensic Sci Int*. 2001; Ireland. p. 197-9.
12. Toro, K. and S. Pollak, *Complex suicide versus complicated suicide*, in *Forensic Sci Int*. 2009; Ireland. p. 6-9.

Suicide, Tramadol, Porta-Potty