G75 "Coca-Cola Man": Sudden Death in a Jailed Mentally Retarded Man After an Altercation Involving Police

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After attending this presentation, attendees will have an increased index of suspicion for diabetes insipidus in unsuspected cases, familiarity with the four types of diabetes insipidus, and gain an understanding of the mechanism of diabetes insipidus in psychogenic polydipsia.

This presentation will impact the forensic community and/or humanity by providing recognition, postmortem diagnosis and classification of diabetes insipidus, and exploring the medical, legal, and media ramifications of death from dipsogenic diabetes insipidus in a mentally retarded inmate.

A 58-year-old inmate of an institution for the mentally retarded, who bore a number of additional psychiatric diagnoses including undifferentiated schizophrenia, violently assaulted a fellow resident, as well as two nursing home workers who attempted to restrain him. He was subdued with the assistance of police. He was arrested for the assault, and taken from the group home to jail, where he received a medical evaluation, and was noted to be in good health. He was jailed for ten days, during which he received ongoing medication with oxcarbazepine. At 0310 hours on the eleventh day, he was found dead on the floor of his cell.

At autopsy, the oral cavity was noted to be full of vomitus. When the vomitus was rinsed away, white foam appeared. An 11" x 8" fading greenbrown bruise occupied most of the right side of the chest, extending across the midline. Two smaller, more recent-appearing bruises were noted on the chest and abdomen. Healing abrasions and almost completely faded bruises were noted on both sides of the upper back, and on the left side of the chest. Multiple bilateral rib fractures appeared, by their freshness, location, and lack of hemorrhage, to have been incurred during cardiopulmonary resuscitative efforts. Natural disease at gross autopsy was restricted to pulmonary emphysema, slight heart hypertrophy, and minor renal changes consistent with hypertension. There was no coronary artery disease, and no coronary thrombosis or pulmonary embolism. It was noted that the urine was root beer colored.

Vitreous electrolytes, analyzed the following day, exhibited a severe deviation from expected values. The BUN was 127 mg/dl, and the creatinine, 1.2 mg/dl. The sodium level was 180 mmol/L, and the chloride level, 150 mmol/L. Potassium, CO_2, and glucose showed a postmortem pattern.

Significant social history included moderate mental retardation, a variety of psychiatric diagnoses, and a noted addiction to soft drink products. At the hospital where he underwent occasional treatment for exacerbation of psychiatric symptoms, the inmate was referred to as "CocaCola man," due to his nonstop consumption of as much of this soft drink as he could obtain. Psychiatric treatment notes had documented a recommendation that he be switched from caffeinated and sugar-containing soda to decaffeinated and diet soda, to control some of his behavior problems.

Death was due to marked hemoconcentration. Consultation with a local endocrinologist suggested the disorder diabetes insipidus.

Diabetes insipidus is a disorder of excessive urination, which may be traced to four types of inciting cause. One type, gestagenic, occurs only in association with pregnancy. Another, neurogenic, is due to a pituitary lesion, which may be acquired or congenital. A third, nephrogenic, may be congenital, but may also be drug-associated. Certain commonly administered drugs are well known to be associated with diabetes insipidus, including lithium, foscarnet, and clozapine, as well as many cytostatic drugs and antimicrobials. No record of administration of any of these drugs could be found. Trileptal is not associated with diabetes insipidus.

The fourth category of diabetes insipidus is dipsogenic, or caused by psychogenic polydipsia. In this disorder, excessive drinking of any fluid, over a prolonged period of time, causes excessive urination, which may become independent of normal feedback mechanisms. What was originally a psychological compulsion then becomes an organic condition. This disorder could be produced by a protracted indulgence in very large quantities of soft drinks.

As diabetes insipidus was not suspected at autopsy, the opportunity to examine the pituitary was lost. So it cannot be definitively stated whether this was in origin a neurogenic diabetes insipidus, or dipsogenic. A mentally retarded and schizophrenic person with a strong drive to imbibe as much soft drinks as possible may not have recognized water available in his cell as a source of rehydration. Nor could he likely explain his symptoms in terms, which would convey his condition to corrections personnel.

The postmortem diagnosis and classification of diabetes insipidus, and the ramifications of dipsogenic diabetes insipidus in a mentally retarded inmate, will be discussed, along with a consideration of how to deal with newspaper interest in the cause and manner of death.

Diabetes Insipidus, Psychogenic Polydipsia, In-Custody Deaths

 ** Presenting Author*