



K20 Use of Tetrahydrozoline (Visine®) for Chemical Submission and Sexual Assault in Children

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After attending this presentation, attendees will have knowledge of the potential use of tetrahydrozoline as an agent for chemical submission and sexual assault.

This presentation will impact the forensic community and/or humanity by providing a better recognition of a drug potentially used for sexual assault. Without this knowledge this drug may go undetected in potential criminal cases.

This is a report of the use of a commonly available over-the-counter drug to induce an obtund compliant victim with no memory of the period during the sexual assault. It provides the results from a police investigation into crimes against children as well as the investigation of the method used by the perpetrators of the crimes to repeatedly allow assault while inhibiting any memory of the time under sedation. It will also discuss toxic mechanism of tetrahydrozoline.

In 2003, police investigation located pictorial evidence on the Internet of adults having sex with children. Further investigation located these children in the United States and they were removed from the home. An adult male relative with sole legal custody had primary care of the children and was a suspect in the investigation. The 4 female children were 2 years old through 8 years old at the time the abuses occurred. After being removed from the home the children were interviewed and entered into counselling. However, during all interviews and counselling sessions over the subsequent year following removal from the home the children denied having any specific memories of the sexual assaults, despite the pictorial evidence in which police could positively identify them. The children did give a history of being given a substance by their "father" when they were "bad," prior to their punishment, so that they "would not remember." The home of the male guardian was searched for drugs of abuse and those drugs known to be used in chemical submission. No drugs were located. Interviews with the wife of the suspect (not the mother of the children) indicated the suspect would give the children Visine® prior to any sexual assault and the suspect would routinely carry around a bottle of Visine® with him. This history was obtained more than one year after the children had been removed from the home and so prohibited any testing of the children for tetrahydrozoline. It is unclear where the suspect learned of sedative effects of Visine®.

Visine® contains 0.05% tetrahydrozoline. Tetrahydrozoline is a central alpha-1 agonist with a similar effect to clonidine and tizanidine. Effects from unintentional and intentional ingestion may include the narcotic-like effects of sedation, coma, miosis, and respiratory depression along with the cardiovascular effects of bradycardia and hypotension. The toxic dose is poorly defined but may be as small as 2 ml of a 0.05% solution for a child. No fatalities have been reported. The effects from tetrahydrozoline may be more pronounced in children than adults. Overdoses have been reported in both children and adults, but intentional use for chemical submission has not been previously reported. One case report of a suicide attempt in an adult reports the patient learned of the effects of tetrahydrozoline from bartenders and prostitutes that had used it to subdue rowdy customers. Tetrahydrozoline is well absorbed with clinical effects evident in 15 minutes after ingestion.

Tetrahydrozoline will not be detected on routine toxicology investigation. It had been reported to produce false negative results for cannabinoids with urine immunoassay screens.

An underground rumor, with continuance of the rumor by Internet web sites, suggest that putting Visine® in an unsuspecting victim's drink will cause them to have sudden onset of "explosive" diarrhea. It is reported to be a method of "revenge" against difficult customers in bars and restaurants. Gastrointestinal effects from tetrahydrozoline are not supported by the medical literature but the perpetuation of the rumor suggests this may still be used upon unsuspecting victims with unintended and potentially life threatening consequences.

This case suggests that tetrahydrozoline should be added to the list of drugs suspected in cases of chemical submission and sexual assault. Along with other drugs used for this purpose, such as GHB (gamma hydroxybutyrate) and ketamine, tetrahydrozoline may not be detected on routine drug screens.

Tetrahydrozoline, Chemical Submission, Sexual Assault