



Pathology Biology Section – 2006

G12 Methadone Treatment and Drug Overdose in Geneva, Switzerland, From 1994 to 2003

Guillaume Perret, MD, Institut Universitaire de Medecine Legale de Geneve, 9 av. de Champel, CMU, Geneva, 1211, Switzerland; Ann Ho, PhD, and Mary Jeanne Kreek, MD, Laboratory of the Biology of Addictive Diseases, Rockefeller University, 1320 York Avenue, New York, NY 10021; and Romano La Harpe, MD, Institut Universitaire de Medecine Legale de Geneve, CMU, 9 av. de Champel, Geneva, 1211, Switzerland*

After attending this presentation, attendees will learn how lethal methadone intoxications while on methadone treatment are very rare and probably due to a lack of strict medical oversight.

This presentation will impact the forensic community and/or humanity by demonstrating why it is important to collect good information regarding drug and clinical history when considering lethal methadone intoxications. In this study, most of the decedents were not enrolled in methadone programs. Wide access to methadone treatment with good medical oversight does not lead to an increase of lethal methadone intoxications and may be responsible for a large decrease of overall drug intoxication deaths.

This presentation will show that methadone treatment is safe when well controlled medically and that methadone overdoses are in most cases due to diverted methadone. It will extend an earlier study reported in 2000, covering the years 1994 to 1998, showing that in Geneva, the wide access to methadone treatment did not lead to an increase of lethal methadone intoxication and may be responsible for a large decrease of overall drug intoxication deaths.

It is hypothesized that the decrease in the number of lethal drug intoxications that started in 1995 had continued through 2004 because of the wide access to methadone treatment, which provides treatment to most of the heroin addicts in Geneva. In 2000, the estimated number of addicted drug users in Geneva, including users of heroin, cocaine, cannabis, and benzodiazepines was 2500. The number of methadone treated patients in 2005 is 1356 and the new heroin users asking for methadone treatment is dropping steadily. From 1 January 1994 to 31 December 2003, the authors studied systematically all toxicological data from all cases in which methadone and/or morphine was found. Cases were selected on the basis that the only cause of death was a potentially lethal drug concentration in the postmortem blood sample. For each case in which methadone was found, information regarding drug and clinical history was collected from police sources and from the Health Authority for each registered methadone-treated patient.

It was discovered that the drop of lethal drug intoxications starting in 1995 continued until 2003. Methadone lethal intoxications remain stable and low - around five cases per year. Most of them are due to illegally diverted methadone used by a person not in treatment. Cocaine overdoses have increased since 2002. Most of the lethal overdoses have other drugs present in the blood, the commonest being benzodiazepines and alcohol.

In conclusion, methadone treatment has been very successfully implemented in Geneva since the 1970s and has been widely available since the 1990's, with a dramatic decrease of heroin overdoses. This can be explained by the fact that almost all heroin addicts have easy access to treatment. The wide access to methadone treatment has not lead to an increase of lethal methadone intoxications. The lethal methadone intoxications while on methadone treatment are very rare and probably due to a lack of strict medical oversight. It is important to note that most of the decedents were not enrolled in methadone programs.

Methadone, Addiction, Overdose