



K34 Heroin-Related Deaths in the West of Scotland Between 2008 and 2011

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After attending this presentation, attendees will be able to detail the demography, toxicology findings, and pathology of Heroin-Related Deaths (HRDs) in the west of Scotland between 2008 and 2011.

This presentation will impact the forensic science community by providing an evaluation of the role of morphine in HRDs, Drug-Related Deaths (DRDs), and non-Drug-Related Deaths (non-DRDs) in 767 cases during a three-year period.

In this study, HRDs in the west of Scotland between 2008 and 2011 were analyzed and compared to non-DRDs in the same period. A total of 767 cases were identified in which morphine was detected postmortem. Information on these cases was extracted from the Glasgow University Forensic Medicine (GUFM) database and analyzed using Excel®.

In 2009, the General Register Office for Scotland reported 545 DRDs in Scotland, with 37% occurring in the Greater Glasgow and Clyde area. A large proportion of these deaths occur due to the use of heroin, which was implicated in 59% of all DRDs in Scotland. Heroin continues to be reported in a large number of DRDs in the west of Scotland, often leading this area to be referred to as the heroin capital of Europe.

There were 323 HRDs identified over the study period. The mean age in these cases was 34.9 years, 84% were male, and the majority of people died in their own home (54.9%). In cases which were not classified as DRDs, the average age was 45.9 years, 69% were male, and 46% of people died in a hospital. Areas within Greater Glasgow and Clyde with the highest percentage HRDs were Glasgow West, Glasgow East, and Renfrewshire. In this population, the median blood morphine concentration in HRDs was 0.26mg/L, which was significantly higher than the morphine concentration in non-DRDs: 0.09mg/L. In the minority of HRDs (37%), only heroin was implicated in the cause of death. Alcohol (35%) and methadone (24%) most often contributed to the cause of death. In 23 cases of all non-DRDs, heroin was administered for medical care prior to death. The median blood morphine concentration in those cases was 0.16mg/L, which was lower than blood morphine concentration in HRDs, but not statistically significant.

The majority of heroin-related fatalities are male with an average age of 34.9 years at death, which means a considerable loss of life compared to the average life expectancy in Scotland. Most deaths occurred at home, indicating there was little time from heroin use to death. Next to heroin, alcohol and methadone were involved in the cause of death in almost 60% of cases. Overall, the mean blood morphine concentration in heroin fatalities was more than 50% higher than in non-DRDs (0.37mg/L vs. 0.24mg/L).

Heroin, Demographic, Postmortem