

## Sudden Death in Young – Causes and Morphological Finding; Data from Latvian Register from year 2011

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**Introduction.** Despite improvement in early detection on risk factors of Sudden Cardiac Death (SCD), rate of events remain dramatically high.

**The aim.** The aim of our study was to analyse cases on SCD and morphological finding of victims.

**Materials and methods.** We analysed data from Data bases of National Forensic Medicine Centre and National Health Statistic Agency in 2011, and national Register of SCD. Analysis included all death in younger than 35, victims were divided in 4 age groups: 0–2, 3–13, 14–21, 22–35, places of events (public places – institution, streets, sport complexes, home and health care system offices). We analysed ambulance visits with death and morphological finding in forensic medicine centre: coronary heart diseases, cardiomyopathies (hypertrophic [HCMP], dilatation [DCMP], arrhythmogenic), congenital heart diseases [CHD], intoxication and unexplained death. All patients are Caucasians.

**Results.** Ambulance visits in 2011 fixed 345 deaths younger than 35, male [M] 276, women [W] 69. At home M 137, W 40, street M 110, W 20, other public places M 27, W 4, and healthcare system M 2, W 2. Unsuccessful resuscitation – M 53, W 19. Proportion between M and W was: all death 80% men, on street and public places M 85.1%, at home M 77.4%. Coronary heart diseases were observed only in men, 5 in total and all in the group after 22 years of age. Most frequent cases on SCD were cardiomyopathies: total 51, high statistical significance often in men. 15 of them were HCMP: two in 0–2 years of age group, one in 3–13, five in 14–21 and 15 after 22 years of age. Intoxication incl.ethanol was observed in 21 cases, 18 of them are men, 19 cases were after 22 years of age.

In comparison with the data from 2009–2010 decreased rate of death was observed, in HCMP and DCMP. Lower rate of death was observed in victims in public places and in younger groups that can be explained with a more active identification of cardiomyopathies and national algorithm on diagnostic and treatment.

**Conclusions.** Despite the improvement of early diagnostics, the rate of deaths in young people remains relatively high. Coronary problems occur more in patients close to 35 years of age, but HCMP remains a dangerous disease in all ages. SCD in young more often were observed in men. Diagnostic algorithm can be improved by early diagnostics of high risk and can decrease the level of mortality.