

SHC 26. USING OF ENTOMOTOXICOLOGY IN AUTOPSY PRACTICE

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The objective of postmortem toxicological examination is to determine chemical substances caused or contributed to death. When body fluids (blood, urine etc.) are contaminated or not obtained due to decomposition, internal organ tissues may be used as alternative samples. In advanced decomposed bodies that any tissue couldn't be determined Entomological Samples (ES) also may be used as an alternative.

In our study, two decomposed cases which were performed autopsies, were evaluated. It is aimed to investigate contribution of drugs and their amounts which were identified in entomological and tissue samples derived at autopsy, to determinate cause of death. In addition, it was discussed whether ES evaluated as a supporting sample to other tissues derived at autopsy.

Case 1: A 29-year-old male body of which insect activity and postmortem changes of decomposition were began. In his autopsy, some tissue samples (liver, muscle) and ES were taken. Samples were analyzed in LC-MS-MS. JWH-018 was determined as 2.53ng/g in liver, <1ng/g in muscle, <1ng/g in ES (larva in distilled water).

Case 2: A 21-year-old male body which carries same features with case 1 is practiced. In his autopsy, some tissue samples (liver, bone marrow, muscle) and ES were taken. 6-MAM was determined as 0.19ng/g in liver, 0.14ng/g in muscle, 4.28ng/g in ES. Morphine was determined as 68.04ng/g in liver, 35.79ng/g in muscle, 1.77ng/g in bone marrow, 50.43ng/g in ES, 21.52ng/g in ES (larva in distilled water).

It was considered that entomotoxicology may contribute to estimation of cause of death, especially to determine the abused substances firmly. However, entomotoxicology may not reveal whether substance is in lethal dose or not, in drug induced deaths; it can provide accurate information about use of drug. So ES are necessary materials in toxicological analysis.

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