

P53. A REVIEW OF EFFECTS OF MORPHINE ON DEVELOPMENT OF DIPTERAL LARVAE IN MORPHINE RELATED DEATHS

H. Nihal AÇIKGÖZ¹, Ulaş SAĞDUYU²

¹Ankara University, Forensic Sciences Institute, Forensic Biology Department, Ankara, TÜRKİYE

²Ankara University, Forensic Sciences Institute, Physical Examinations and Criminalistic Department, Ankara, TÜRKİYE

Forensic entomotoxicological methods are used in practice to detect and to identify narcotics including morphine, heroin and cocaine in deaths from these substances and drugs in deaths from deliberate and accidental intake of drugs and to determine the time of death. Necrophage insects are reliable material in toxicological analyses in cases in which conventional specimens including blood, urine and internal organs cannot be used as a result of putrefaction occurring after death.

The aim of this review is to emphasize the importance of effects of morphine on development of blowfly larvae and on determination of post-mortem interval in forensic cases.

The key words “morphine and blowfly” were used and all articles including these keywords, written in English, published between 2000 and 2014 and found in National Library of Medicine’s PubMed Medline database were obtained. Effects of morphine on the development of blowfly larvae were examined based on results of the studies reported in the obtained articles.

The results of the studies showed that morphine slowed down the life cycle of *Lucilia sericata*, but accelerated that of *Chrysomya megacephala*. Differences in effects of morphine on life cycles of different species must be evaluated carefully.

Since tissue specimens appropriate for toxicological analyses cannot be found on corpses in deaths suspected of being caused by drugs, larvae on these corpses should not be disregarded. They should be collected and exposed to toxicological analyses. It should be kept in mind that different Dipteran species can react to the same drug differently, which can be a very important criterion in an accurate determination of post mortem interval.