

INTISARI

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Latar Belakang : Lalat memiliki peranan penting dalam bidang entomologi forensik guna mengungkap kasus kriminalitas yang ditinjau melalui siklus hidupnya. Pertumbuhan dan perkembangan lalat sangat dipengaruhi oleh berbagai faktor lingkungan. Selain itu, keberadaan senyawa obat pada tubuh jenazah juga mempengaruhi pertumbuhan dan perkembangan lalat. Morfin diketahui dapat mempercepat siklus hidup lalat dan meningkatkan ukuran tubuh.

Tujuan : Mengetahui pengaruh morfin terhadap ketertarikan spesies dan perkembangan larva lalat serta mendeteksi keberadaan morfin pada larva lalat

Metode : Penelitian dilakukan secara kuasi eksperimental dengan *post test only control group design* yang terdiri atas 3 kelompok. Satu kelompok sebagai kontrol sedangkan dua kelompok lainnya mendapat pemberian morfin dosis 69,15 mg (LD₅₀) dan 138,3 mg (2 LD₅₀) secara *per oral*. Masing-masing kelompok terdiri atas 3 ekor tikus Wistar. Bangkai tikus diletakkan di Kebun Biologi UGM.

Hasil : Lalat imago yang hinggap pada tubuh bangkai tikus meliputi *Calliphora sp.*, *Sarcophaga sp.*, *Chrysomya sp.*, dan *Stomoxys sp.* sedangkan larva yang berhasil diidentifikasi, meliputi *Calliphora sp.*, *Sarcophaga sp.*, dan *Chrysomya sp.* Tidak terdapat perbedaan ketertarikan spesies antar kelompok. Morfin terdeteksi pada bagian kutikula. Tidak terdapat perbedaan ketertarikan spesies antar kelompok. Terdapat akumulasi morfin pada larva lalat instar dua dan instar tiga sedangkan larva instar satu tidak terdapat akumulasi morfin. Morfin terdeteksi pada bagian kutikula *Calliphora sp.*, *Sarcophaga sp.*, dan *Chrysomya sp.* Tidak terdapat perbedaan akumulasi morfin pada larva lalat kelompok pemberian morfin dosis 69,15 mg (LD₅₀) dan 138,3 mg (2 LD₅₀). Pemberian morfin dosis 138,3 mg (2 LD₅₀) meningkatkan panjang dan berat tubuh larva lalat secara signifikan ($p < 0,05$).

Kesimpulan : Morfin tidak berpengaruh terhadap ketertarikan lalat, namun berpengaruh terhadap perkembangan larva lalat, dan morfin terdeteksi pada instar dua dan kutikula instar tiga *Calliphora sp.*, *Sarcophaga sp.*, dan *Chrysomya sp.*

Kata Kunci : morfin, larva lalat, perkembangan, ketertarikan spesies, entomologi forensik

ABSTRACT

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Background : Flies have major role in forensic entomology to uncovered criminal case by their life cycle. Flies development is influenced by many environmental factors. In addition, existence of drug in human cadaver or carcasses also influence the development of flies

Objective : To know morphine influence on attracted spesies and flies development and also to detect morphine accumulation on larvae.

Method : This research was conducted by experimental quation applying post test only control group design with three groups of treatment. One group served as control whereas two other groups were treated with oral morphine as much as 69,15 mg (LD₅₀) and 138,3 mg (2 LD₅₀). There was three Wistar rats for each group. Rat carcasses were placed on Botanical Garden GMU.

Result : Adult flies of *Calliphora sp.*, *Chrysomya sp.*, *Sarcophaga sp.*, and *Stomoxys sp.* were found in rat carcasses, but only larvae of *Calliphora sp.*, *Chrysomya sp.*, and *Sarcophaga sp.* was successfully identify. Nothing differences of attracted species were found in inter group. There was morphine accumulation second larvae and third larvae whereas morphine was not detected on first larvae. Morphine was detected on cuticle of *Calliphora sp.*, *Sarcophaga sp.*, and *Chrysomya sp.* Morphine accumulated in morphine dosage 69,15 mg (LD₅₀) group as same as in morphine dosage 138,3 mg (2 LD₅₀) group. Rat carcasses which receiving morphine 138,3 mg (2 LD₅₀) significantly increase body length and weight (p<0,05)

Conclusion : Morphine was not influenced on attracted fly of *Callip*but influenced on development larvae, and morphine was accumulation in second larvae and third larvae cuticle of *Calliphora sp.*, *Sarcophaga sp.*, and *Chrysomya sp.*

Keyword : morphine, flies larvae, development, attracted spesies, forensic entomology