INTISARI

Pengaruh Amitriptilin terhadap Pertumbuhan Larva Lalat pada Bangkai Tikus *Rattus novergicus Strain Wistar* dalam Memperkirakan Post Mortem Interval

Hafni Sofhia, Yudha Nurhantari, Siti Rahmah Umniyati

LATAR BELAKANG : Amitriptilin merupakan antidepressan yang paling banyak dikonsumsi. Tetapi banyaknya kasus kematian akibat keracunan/overdosis penggunaan obat tersebut dapat merancukan investigasi entomologi Forensik mengenai *Post Mortem Interval.* Tidak ada data acuan di Daerah Istimewa Yogakarta.
TUJUAN : Mengetahui perbedaan tahap pembusukan, urutan kedatangan dan pertumbuhan larva lalat bangkai tikus *Rattus novergicus strain wistar* pada perlakuan kontrol, amitriptilin LD50, dan 2LD50.
METODE : Studi eksperimental terhadap panjang, berat, dan urutan kedatangan lalat bangkai dengan paparan amitriptilin LD50 (350mg/kgBB), 2LD50 (700mg/kgBB), dan kontrol. Pengamatan dan pengambilan 10% populasi sampel dilakukan per hari hingga bangkai habis.
HASIL : Bangkai kontrol mengalami tahap pembusukan paling cepat. Pada LD50 dan 2LD50 mengalami pemanjangan laju pembusukan, namun pada laju 2LD50 terjadi lebih cepat. Pada kontrol ditemukan 3 genus lalat sedangkan pada LD50 dan 2LD50 ditemukan 5 genus lalat. Urutan kedatangan lalat hanya diidentifikasi pada instar 3 pertama kali muncul dimana pada kontrol ditemukan *Sarcophaga sp., Calliphora sp.,* dan *Chrysomia sp.* pada hari yang sama, sedangkan pada LD50 ditemukan *Sarcophaga sp.* dan *Auchmeromyia sp.*yang disusul oleh *Calliphora sp., Chrysomia sp., dan Phormia sp..* Pada 2LD50 ditemukan *Sarcophaga sp., Calliphora sp., Phormia sp., Auchmeromyia sp.* muncul paling akhir. Tidak ada perbedaan signifikan antara pengaruh amitriptilin dengan pertumbuhan larva lalat sebagian besar genus, namun pada *Calliphora sp.* ditemukan pemendekkan larva lalat seiring dengan peningkatan dosis amitrptilin.
KESIMPULAN : Terdapat perbedaan tahap pembusukan dan urutan kedatangan lalat, serta panjang *Calliphora sp.* pada ketiga perlakuan.

Kata Kunci : *Post Mortem Interval*, amitriptilin, larva lalat

ABSTRACT

Effect of Amitriptyline on Maggots Fly Growth in the Corpse of Rattus novergicus Strain Wistar to Estimate Post Mortem Interval

Hafni Sofhia, Yudha Nurhantari, Siti Rahmah Umniyati

BACKGROUND : Amitriptyline is anti depression drug which is the most consumed by people. But, so many death cases of poisoning/drug abuse that can interfere entomological forensic investigation about *Post Mortem Interval* in corpse. There are no reference data in Yogyakarta district.

GOAL : To compare decomposition stage and rate, sequence of arrival, and growth of maggots in *Rattus novergicus strain wistar* corpse that exposed to amitriptyline LD50, 2LD50, and control.

METHOD : Experimental study on length, mass and sequence of arrival maggots in rat's corpse that exposed by amitriptyline LD50 (350mg/kgBB), 2LD50 (700mg/kgBB), and control. Observation and collection method is done by collecting 10% of population sample each day until corpse get through.

RESULT : The rate of decomposition stage in **c**ontrol's corpse is the most fast. In LD50 and 2LD50 have slower decomposition rate, but decomposition rate in 2LD50 is faster. There are 3 fly genuses found in control's corpse, meanwhile there are found 5 fly genuses in LD50 and 2LD50. The sequence of fly arrival only can be identified when instar 3 are first found. In control, there are found *Sarcophaga sp., Calliphora sp.,* and *Chrysomia sp.* in the same day, whereas in LD50 *Sarcophaga sp. and Auchmeromyia sp.* come first, then *Calliphora sp., Chrysomia sp., and Phormia sp..* In 2LD50 the first genus that come are *Sarcophaga sp., Calliphora sp., Phormia sp., Auchmeromyia sp.* comes at last. There are no significant effect of amitriptyline in maggots' growth, but there are significant data that length of *Calliphora sp. maggots are shorter along with higher dose of amitriptyline.*

CONCLUSION : There are difference stage and rate of decomposition, sequence of fly arrival, and length of *Calliphora sp.* in all groups.

KEYWORDS : *Post Mortem Interval*, amitriptyline, maggots