Data Article

Data of drowning related deaths with reference to entomological evidence from Haryana

Jyoti Dalal, Sapna Sharma, Kapil Verma, S.K. Dhattarwal, Tapeshwar Bhardwaj

Department of Genetics, Maharshi Dayanand University, Rohtak, Haryana, India
Department of Forensic Medicine, Post Graduate Institute of Medical Sciences, Rohtak, Haryana India

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A B S T R A C T

Most often the newspapers and bulletin come out with voluminous cases of deaths due to drowning. At the same time an ample section of such cases encompass entomological evidences, that can be scrutinized as a very useful parameter in estimating post mortem interval (PMI). This research database is an outcome of a 2 years reflective study, based on an assessment of records related to human deaths due to drowning. The drowned bodies from various districts of Haryana are sent to PGIMS (Post Graduate Institute of Medical Sciences), Rohtak. The study took the data of year 2015–2016 into consideration. All the cases were reviewed and summarized in terms of monthly occurrence of total cases, age differentiation, gender differentiation and month wise occurrence of entomological evidences on the dead bodies through detailed study of post mortem findings. This data will lead to an insight into the magnitude of drowning deaths in Haryana along with the usage of entomological data for determining Post Mortem Submersion Intervals (PMSI).

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### Specifications Table

| Subject area          | Forensic Science               |
|----------------------|--------------------------------|
| More specific subject area | Drowning deaths and Forensic Entomology |
| Type of data         | Figure and Tables              |
| How data was acquired | Data has been acquired by survey method from Post Graduate Institute of Medical Sciences (PGIMS), Rohtak (Haryana) with kind permission of the concerned authority. |
| Data format          | Filtered and Analyzed          |
| Experimental factors | Nil                            |
| Experimental features | The distribution patterns of death due to drowning in aquatic system were evaluated in the context of location, year, month, gender and age wise variations with respect to the presence or absence of entomological evidence. |
| Data source location | Rohtak, India                  |
|                      | Latitude: 28.895515 and Longitude: 76.606613 |
|                      | GPS coordinates: 28° 53′ 43.8540″ N and 76° 36′ 23.8068″ E. |
| Data accessibility   | Data is available with this article |

### Value of the data

- Routine monitoring of deaths due to drowning in an aquatic environment is very important for medicolegal and forensic purposes around the world.
- Little is known about the trend of drowning related death in an aquatic habitat with respect to entomological evidence, so the present data emerge of immense value since no data is available on this important aspect from Haryana.
- The information provided in this data set bring about new ideas for forensic experts and police officers about the trend of drowning deaths in an aquatic habitat with respect to the presence or absence of any entomological testament.
- This kind of data is also useful for scientists and researchers working in the field of forensic medicine, aquatic entomology and forensic entomology. It administers detailing to the inhabitance of entomological specimen in this particular area.
- Entomological facts generated in the study provide a pandora of information which can be useful for future efforts in the discipline of forensic entomology.
- The details contributed here would be the first of its kind for the readers to fully understand the types and trends of drowning deaths with a special emphasis on entomological knowledge in an aquatic environment.
- The present data shows the presence of entomological specimen with most of the recovered drowned bodies. The neglect of this evidence is no more possible.
- This data will also provide means of determining PMI in aquatic environments, when the initial signs of decomposition have passed off.
- This data serves as a source of information for the research institutes as well as for the forensic science community. It can be further used to correlate the significance of entomological specimen present in drowned bodies for future research in this particular area.

### 1. Data

The data provided in this article explain about the trend of deaths in an aquatic environment and the significance of entomological evidence in drowning deaths from Haryana, India (Fig. 1). There have been nearly no studies to correlate drowning deaths with entomological specimens. Forensic
Fig. 1. Map of Haryana showing study area.
entomology is an upcoming and promising science in India but also a neglected one [1]. This study proves the association of insects species on drowned bodies. The initial decomposition signs usually pass off, so this branch becomes of special significance for ascertaining a minimum Post Mortem Submersion Interval (PMSI) if used efficiently.

2. Experimental design, materials and methods

Experimental design consists of frequencies based on the distribution patterns of death due to drowning in an aquatic system. These patterns were evaluated in the context of location, year, month, gender and age wise variations. The present database comprises of drowning death cases reported in the Department of Forensic Medicine, Post Graduate Institute of Medical Sciences (PGIMS), Rohtak from 1st January, 2015 up to 31st December, 2016. All the drowning related death cases were surveyed and filtered from the Post-mortem Reports (PMRs) (Tables 1–5).

| Name of district | 2015 | 2016 |
|------------------|------|------|
| Ambala           | 0    | 2    |
| Bhiwani          | 21   | 32   |
| Faridabad        | 12   | 14   |
| Jhajjar          | 32   | 41   |
| Jind             | 6    | 22   |
| Kaithal          | 6    | 10   |
| Karnal           | 22   | 24   |
| Kurukshetra      | 0    | 2    |
| Mahendergarh     | 7    | 5    |
| Palwal           | 0    | 1    |
| Panipat          | 21   | 28   |
| Rewari           | 9    | 18   |
| Rohtak           | 30   | 42   |
| Sonepat          | 0    | 1    |
| Yamunanagar      | 1    | 2    |
| Total            | 167  | 244  |

| Month      | 2015 | 2016 |
|------------|------|------|
| Number of cases | Percentage (%) | Number of cases | Percentage (%) |
| January    | 4    | 2.39 | 9    | 3.69 |
| February   | 6    | 3.59 | 10   | 4.1  |
| March      | 5    | 2.99 | 16   | 6.56 |
| April      | 8    | 4.79 | 25   | 10.24|
| May        | 25   | 14.97| 28   | 11.48|
| June       | 20   | 11.97| 29   | 11.89|
| July       | 23   | 13.78| 29   | 11.89|
| August     | 29   | 17.36| 38   | 15.58|
| September  | 21   | 12.57| 23   | 9.42 |
| October    | 11   | 6.58 | 21   | 8.6  |
| November   | 9    | 5.38 | 7    | 2.86 |
| December   | 6    | 3.59 | 9    | 3.69 |
| Total      | 167  | 244  |      |      |
Table 3
Distribution frequency of drowning deaths in 2015–16.

|       | 2015 |       | 2016 |       |
|-------|------|-------|------|-------|
|       | Number of cases | Percentage (%) | Number of cases | Percentage (%) |
| Male  | 135  | 80.84 | 198  | 81.15 |
| Female| 30   | 17.96 | 44   | 18.03 |
| Unidentified | 2  | 1.2  | 2    | 0.82  |
| Total | 167  |       | 244  |       |

Table 4
Gender wise frequency of drowning deaths according to different age groups in 2015–16.

| Age group | Males |       | Female |       |
|-----------|-------|-------|--------|-------|
|           | 2015  | 2016  | 2015   | 2016  |
|           | Number of cases | Percentage (%) | Number of cases | Percentage (%) | Number of cases | Percentage (%) | Number of cases | Percentage (%) |
| 0–15      | 5     | 3.7   | 6      | 3.03  | 1     | 3.33  | 3      | 6.82 |
| 16–30     | 36    | 26.67 | 63     | 31.82 | 16    | 53.33 | 25     | 56.82 |
| 31–40     | 44    | 32.6  | 51     | 25.76 | 10    | 33.33 | 8      | 18.18 |
| 41–60     | 32    | 23.7  | 51     | 25.76 | 1     | 3.33  | 5      | 11.36 |
| > 60      | 7     | 5.18  | 21     | 10.6  | 2     | 6.67  | 3      | 6.82 |
| Age not mentioned | 11 | 8.15 | 6 | 3.03 | 0 | 0 | 0 | 0 |
| Total     | 135   |       | 198    |       | 30    |       | 44     |       |

Table 5
Data associated with drowning deaths with respect to presence or absence of entomological evidences in 2015–16.

| Month     | 2015 With entomological evidences | Without entomological evidences | 2016 With entomological evidences | Without entomological evidences |
|-----------|-----------------------------------|---------------------------------|-----------------------------------|---------------------------------|
| January   | 0                                 | 4                              | 3                                 | 6                              |
| February  | 2                                 | 4                              | 3                                 | 7                              |
| March     | 4                                 | 1                              | 15                                | 1                              |
| April     | 6                                 | 2                              | 18                                | 7                              |
| May       | 22                                | 3                              | 23                                | 5                              |
| June      | 18                                | 2                              | 29                                | 0                              |
| July      | 21                                | 2                              | 28                                | 1                              |
| August    | 27                                | 2                              | 34                                | 4                              |
| September | 16                                | 5                              | 15                                | 8                              |
| October   | 11                                | 0                              | 17                                | 4                              |
| November  | 6                                 | 3                              | 4                                 | 3                              |
| December  | 4                                 | 2                              | 3                                 | 6                              |
| Total:    | 137                               | 30                             | 192                               | 52                             |

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**Transparency document. Supplementary material**

Transparency document associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.dib.2017.10.064.

**Reference**

[1] R. Sharma, R.K. Garg, J.R. Gaur, Various methods for the estimation of the post mortem interval from Calliphoridae: A review, Egypt. J. Forensic Sci. 5 (2015) 1–12.