Data Article

Data in support of poisoning related mortalities from southern Himachal Pradesh

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ABSTRACT

Poisoning has always been pointed as one of the leading causes of human death throughout the world. Despite the best efforts made by many research institutes, the worldwide true figure on mortalities with poisoning could never be achieved due to many reasons. One of the main reasons is the unavailability of complete database from the rural and catchment areas of the world where these types of incidents are usual. People can be made aware about this problem by presenting data articles on regular basis, therefore to mark a resource document these data should be regularly up-dated. The current data report is a briefing of types and trends of chemical poisoning amongst human in southern hilly region of Himachal Pradesh (HP), India. This research database is an outcome of five year retrospective study based on assessment of records pertaining human deaths associated with poisoning occurred in southern Himachal Pradesh, and reported at State Forensic Science Laboratory (SFSL), Junga during 2010-14. Cases where ethyl alcohol was detected have been put under exclusion criterion. All the cases were reviewed and summarized in terms of yearly and monthly frequency of reports wrapping important information portraying the involvement of gender, age, locality, types of poison, and mode of death in the poisoning incidents. Review of these scientific reports showed some notable figures having a direct concern with public and legal domains to promote risk reduction and prevention of chemical poisonings.
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Specifications Table

| Subject area             | Forensic Science           |
|--------------------------|---------------------------|
| More specific subject area | Toxicology                |
| Type of data             | Figure and Tables         |
| How data was acquired    | Surveyed at SFSL, Junga (HP) with kind permission of authority. |
| Data format              | Filtered and analyzed      |
| Experimental factors     | Nil                        |
| Experimental features    | Experimental design included tabulation of frequency in number and percentile of occurrence of factors based on different epidemiological parameters. |
| Data source location     | Himachal Pradesh (30° 22.40 N to 33° 12.40 N latitude and 75° 45.55E to 79° 04.20E longitude). |
| Data accessibility       | Data are available with this article. |

Value of the data

- Routine monitoring of deaths due to poisoning is an essential exercise to refreshing the database from all corners of the world. So, the current data become of high value as not much literature is available on chemical poisoning in human from HP.
- The data provided here is first of its kind information for readers to fully understand types and trends of poisoning prevailing in this part of the world.
- The information contained in this data report is intended for general use to assist public knowledge and research as well. These data are also a source of information for the state and native poison control centres and many other institutes to conduct research and strategize to deal this type of problem.

1. Data

Due to easy availability, the use of chemical poisons has remained one of the most common ways of ending human lives by any mode of death. Large numbers of people die every year due to poisoning, especially acute pesticide poisoning [1]. A very high number of fatalities also occur in India due to poisoning [2–6]. A concise piece of information on poisoning is available from HP [7–11]. Therefore, the data provided in this article explored some significant inferences on mortalities associated with poisoning from southern HP. This data is limited only to those cases which were registered by the law enforcement agencies from Shimla, Solan, Sirmaur and Kinnaur districts situated in the southern region of HP (Fig. 1). All related particulars were obtained from First Information Report (FIR), Post-mortem Report (PMR), and Toxicology reports.

2. Experimental design, materials and methods

The mountainous state of Himachal Pradesh is situated in the western Himalayan region of India. It comprises an area of 55,673 square kilometres divided into 12 districts which are further grouped into three divisions namely Shimla, Kangra and Mandi. The division of Shimla controls Shimla, Kinnaur, Sirmaur and Solan districts located in the southern region of this state. This division is a habitat of ~29% of total population and same coverage of geographical area of the state. These four districts come under the jurisdiction of SFSL established in Junga town. Post-mortem samples including blood,
urine, viscera, gastric lavage or vomits material of victim obtained while autopsy are sent to this laboratory for chemical analysis of poisonous substances (if present any). The present database is inference of cases reported at SFSL, Junga from 1st January, 2010 up to 31st December, 2014. Data analysis involved all kinds of chemical poisoning.

Database revealed 1291 positive reports out of 2721 total cases submitted during study period. Data presented herein is a realistic information depicting year wise reporting of positive cases from all selected districts (Table 1), gender (male & female) and locality (urban & rural) wise difference (Table 2), age groups affected along with gender difference (Table 3), types of poisons involved in different districts (Table 4), district wise poisons involved in different age groups (Table 5), and gender wise modes of death (Table 6). Data revealed that ethyl alcohol was utterly detected in 669 (~52%) cases from all districts during 2010–14. It is important to note that ethyl alcohol was vastly detected in the bodies met with road accidents but it was irresolute to establish death due to alcohol

| Year | Total cases reported | Positive Cases | Cases reported from districts | Percentage |
|------|----------------------|----------------|------------------------------|------------|
|      |                      |                | Shimla          | Solan      | Sirmaur | Kinnaur | out of 1291 |
| 2010 | 566                  | 256            | 114             | 58         | 50      | 34      | 19.83%      |
| 2011 | 521                  | 256            | 107             | 86         | 39      | 24      | 19.83%      |
| 2012 | 481                  | 235            | 115             | 65         | 38      | 17      | 18.20%      |
| 2013 | 521                  | 258            | 105             | 90         | 44      | 19      | 19.98%      |
| 2014 | 632                  | 286            | 117             | 97         | 48      | 24      | 22.15%      |
| Total| 2721                 | 1291           | 558             | 396        | 219     | 118     | 100%        |
|      | Percentage           |                | 43.22%          | 30.67%     | 16.96%  | 9.14%   | 100%        |
Table 2  
Gender and locality wise difference.

|        | Shimla | Solan | Sirmaur | Kinnaur | Total (%) | Total (%) |
|--------|--------|-------|---------|---------|-----------|-----------|
|        | Male   | Female| Male    | Female  | Male      | Female    |
| Rural  | 293    | 80    | 198     | 61      | 104       | 27        |
|        | (78.4%)| (21.6%)|         |         |           |           |
| Urban  | 176    | 9     | 127     | 10      | 68        | 20        |
|        | (89.1%)| (10.9%)|         |         |           |           |
| Total  | 469    | 89    | 325     | 71      | 172       | 47        |
|        | (84.05%)| 15.95%| (82.07%)| 17.93%  | (78.5%)   | 21.5%     |
|        | 1061   | 230   | 1291    |         | 100%      |           |

Table 3  
Age group along with gender involved.

| Age Group          | Shimla | Solan | Sirmaur | Kinnaur | Gender | Total |
|--------------------|--------|-------|---------|---------|--------|-------|
|                    | Male   | Female| Male    | Female  | Male   | Female|
| Child (0–14 years) | 10     | 08    | 02      | 04      | 13     | 11    |
|                    | (54.16%)| (45.84%)|         |         | (54.16%)| (45.84%)|
| Young Adult (15–25 years) | 122 | 100 | 60 | 29 | 206 | 105 |
|                    | (66.24%)| (33.76%)|         |         | (66.24%)| (33.76%)|
| Adult (26–40 years) | 238    | 160   | 100     | 54      | 475    | 77    |
|                    | (86.05%)| (13.95%)|         |         | (86.05%)| (13.95%)|
| Middle Age (41–59 years) | 160 | 114 | 47 | 25 | 318 | 28 |
|                    | (91.90%)| (8.10%)|         |         | (91.90%)| (8.10%)|
| Old Age (60 years and above) | 28 | 14 | 10 | 06 | 49 | 9 |
|                    | (84.48%)| (15.52%)|         |         | (84.48%)| (15.52%)|
| Total              | 558    | 396   | 219     | 118     | 1061   | 230   |
|                    | (87.8%)| (12.2%)| (83.9%)| (16.1%) | (87.8%)| (12.2%)|

Table 4  
District wise number of cases and types of poisons involved.

| Type of poison used                | Shimla | Solan | Sirmaur | Kinnaur | Total | %   |
|------------------------------------|--------|-------|---------|---------|-------|-----|
| Ethyl Alcohol                      | 322    | 203   | 87      | 57      | 669   | 51.82 |
| Insecticide/Pesticides (excluding Phosphine) | 170    | 102   | 73      | 45      | 390   | 30.20 |
| Phosphine                          | 27     | 46    | 39      | 07      | 119   | 9.21 |
| Ethyl Alcohol + Insecticide/Pesticides | 18    | 26    | 11      | 06      | 61    | 4.72 |
| Ethyl Alcohol + Phosphine Gas      | 07     | 07    | 01      | 00      | 15    | 1.61 |
| Prescription Drugs                 | 02     | 04    | 04      | 00      | 10    | 0.77 |
| Others                             | 12     | 08    | 04      | 03      | 27    | 2.09 |
| Total                              | 558    | 396   | 219     | 118     | 1291  | 100% |

*others: volatile solvents (kerosene, toluene and paraffin), inorganic acids, carbon-monoxide, copper sulphate, mercuric chloride, atropine, and blends of ethyl alcohol with carbon monoxide/prescription drugs
impairment in actual. Use of pesticide including Dichlorovos and Paraquat was reported in majority (~30%) of cases. Out of 18 cases of paraquat poisoning, the maximum (10) cases were reported in year 2013 from all districts. Use of aluminum phosphide or zinc phosphide was reported in 12 cases, whereas in rest of the cases only phosphine was mentioned as poisonous substance.

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Transparency document. Supporting information

Transparency data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.dib.2017.04.028.

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