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# **The prevalence of forensic cases at the langsa regional general hospital in 2019-2020 as a basis for considering cooperation in the forensic specialist doctor education program**

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**Abstract**---Background. Forensic medicine is a branch of medical specialties that utilizes medical science to assist law enforcement and solve legal problems. Forensic and medicolegal education has 7 (seven) competency areas that must be met and graduates of forensic and medicolegal specialist doctors are expected to be able to diagnose and manage forensic medical cases according to individual, team or institutional authority. Clinical abilities in this competency standard can be improved through continuous education and training in order to absorb the development of medical science and technology. This ability can be fulfilled by exposure to patient cases in quite a large and varied number, helping students to improve clinical abilities in order to achieve the expected competencies. Aims. This research was conducted to see the prevalence of forensic cases at Langsa Regional General Hospital in 2019-2020. Method. This study was a descriptive with cross sectional design. The study sample was all forensic cases at Langsa Regional General Hospital in January 2019–December 2020 that had met the inclusion and exclusion criteria. The data collection technique is total sampling. The type of data used in this study is secondary data obtained from the results of Visum et Repertum. The data were then analyzed. Result: The prevalence of forensic cases in 2019 to 2020 Langsa Hospital handled 295 forensic cases, with a variety of cases, namely traffic accidents as many as 151 cases (51.2%) as well as the most cases handled. Cases of abuse with the number of cases 91 (30.9%). Cases of sexual crimes with a total of 36 cases (12.2%). Cases of domestic violence as many as 17 cases (5.7 %).

**Keywords**---Prevalence of forensic cases, Education of forensic specialists, medicolegal.

## **Introduction**

Forensic medicine is a specialist branch of medical science that utilizes medical science to assist law enforcement and solve legal problems. The scope of forensic medicine has evolved over time. From the beginning only to the deaths of crime victims, unexpected and unexpected deaths, unidentified corpses, to living crime victims, or even skeletons, tissues and biological materials that are thought to be of human origin. The types of cases also extend from murder, persecution, sexual crimes, domestic violence, child abuse and neglect, disputes over divorce, fraud and abuse in insurance, to human rights violations.<sup>1</sup>

Forensic and medicolegal medical specialist education has seven competency areas that must be met, namely professional ethics and noble professionalism, forensic and medicolegal fields, introspection, personal development and lifelong learning, effective communication and collaboration skills, research, information management and evidence-based medicine, the scientific foundation of forensic medicine, skills in case management and forensic medicine management, as well as justice based on humanities, bioethics, discipline, law and human rights. From this explanation, graduates of forensic and medicolegal specialist doctors are expected to be able to diagnose and manage forensic medical cases according to individual, team or institutional authority, and manage forensic medical installations in health care facilities or other authorized institutions according to professional and service standards.<sup>2</sup>

Clinical ability in this competency standard can be achieved through continuous education and training in order to absorb the development of medical science and technology. Exposure to a large and varied number of patient cases helps students to improve their clinical abilities in order to achieve the expected competencies.<sup>3</sup>

Forensic and Medicolegal Specialist Doctor Education Program, Faculty of Medicine, University of North Sumatra with the main teaching hospital at H. Adam Malik Hospital Medan as well as network hospitals at Dr. Pirngadi Hospital and Universitas Sumatera Utara Hospital, in recent years the number of cases is very small so that it is necessary to look for other hospitals that have the potential as places of education with an adequate number of cases. Based on the above background, researchers are interested in conducting research on the prevalence of forensic cases at the Langsa Regional General Hospital. The results of this study are expected to be used as a basis for consideration of cooperation in the forensic specialist education program at the Faculty of Medicine, Universitas Sumatera Utara.

## **Method**

This study is a descriptive study with a cross-sectional design to see the prevalence of forensic cases as a basis for consideration of collaboration in the forensic specialist education program. This research was conducted at the forensic installation of the Langsa Regional General Hospital, Jl. A. Yani No.1A Langsa Kota. The population in this study were all forensic cases at the Langsa Regional General Hospital in January 2019 – December 2020. The sampling in

this study was based on a total sampling technique, namely all forensic cases at the Langsa Regional General Hospital in 2019-2020.

The inclusion criteria are forensic cases with Visum et Repertum and cases in January 2019 – December 2020. The exclusion criteria in this study were Visum et Repertum not legible and Visum et Repertum incomplete. Data collection was carried out using secondary data obtained from the results of Visum et Repertum at the Langsa Regional General Hospital in January 2019 – December 2020. The data was then analyzed using Statistical Program and Service Solution (SPSS). In this study, the data will be analyzed descriptively. The data will be displayed in the form of tables and diagrams.

## Results

### Description of Forensic Case Characteristics

The results of this study are the results of research collected from secondary data in the form of Visum et Repertum (VeR) data for patients who are victims of live violence at Langsa Hospital from January 1, 2019 to December 31, 2020. The research sample was taken as a whole from the data (total sampling). The number of victims who were treated at the RSUD based on the number of visum et repertum that met the research criteria were 295 cases with 4 types of case variations. This data was then analyzed in univariate form to see the frequency distribution of patients/victims based on the independent variables of the study. This independent variable is a demographic variable that describes the characteristics of the patient/victim including gender, age, degree of injury. To find out the frequency distribution of cases at Langsa Hospital in 2019-2020 can be seen in the table below.

Table 1. Distribution of the frequency of forensic cases handled at Langsa Hospital in 2019-2020

| NO | CASES             | FREQUENCY | PERCENTAGE |
|----|-------------------|-----------|------------|
| 1  | Traffic accident  | 151       | 51,2 %     |
| 2  | Persecution       | 91        | 30,9 %     |
| 3  | Domestic violence | 17        | 5,7 %      |
| 4  | Sexual crimes     | 36        | 12,2 %     |
|    | Total             | 295       | 100,0 %    |

From table 1 it can be seen that from 2019 to 2020 Langsa Hospital handled 295 forensic cases, from 295 research samples there were 4 kinds of case variations, namely traffic accidents as many as 151 cases (51.2%) as well as the most cases handled. Cases of abuse are the second most common case with 91 (30.9 %). Sexual crime cases occupy the third highest number with 36 cases (12.2%). There were 17 cases of domestic violence (5.7%).

### Distribution of Traffic Accident Frequency Based on Characteristics

Table 2. Distribution of traffic accident frequency based on characteristics

| Characteristics        | Frequency  | Percentage    |
|------------------------|------------|---------------|
| Male                   | <b>105</b> | <b>69,5 %</b> |
| Female                 | 46         | 30,5 %        |
| Age :                  |            |               |
| < 11                   | 12         | 8,0 %         |
| 11-20                  | <b>44</b>  | <b>29,1 %</b> |
| 21-30                  | 23         | 15,2 %        |
| 31-40                  | 24         | 15,9 %        |
| 41-50                  | 23         | 15,2 %        |
| >50                    | 25         | 16,6 %        |
| Degree of injury: Mild | 21         | 13,9 %        |
| Moderate               | 95         | 62,9 %        |
| Severe                 | 34         | 22,5 %        |
| Dead                   | 1          | 0,7 %         |
| <b>TOTAL</b>           | <b>151</b> | <b>100 %</b>  |

From Table 2 it can be seen that from 151 cases of traffic accidents during the 2019-2020 period at Langsa Hospital, there were the number of male victims who got the highest position of 105 cases (69.5%), while women there were 46 cases (30.5%). Of all cases of traffic accidents by age group, there are the most age groups in the age group 11-20 years with 44 cases (29.1%). While the frequency of accidents based on the characteristics of the degree of injury suffered by the victim, there was the highest group of moderate injuries, namely 95 cases (62.9%).

### Distribution of Persecution Frequency Based on Characteristics

Table 3. Distribution of Persecution Frequency Based on Characteristics

| Characteristics        | Frequency | Percentage    |
|------------------------|-----------|---------------|
| Male                   | <b>57</b> | <b>56,0 %</b> |
| Female                 | 34        | 37,4 %        |
| Age :                  |           |               |
| < 11                   | 1         | 1,1 %         |
| 11-20                  | 21        | 23,1 %        |
| <b>21-30</b>           | <b>29</b> | <b>31,9 %</b> |
| 31-40                  | 18        | 19,8 %        |
| 41-50                  | 9         | 9,9 %         |
| >50                    | 13        | 14,2 %        |
| Degree of injury: Mild | 16        | 17,6 %        |
| <b>Moderate</b>        | <b>72</b> | <b>79,1 %</b> |
| Severe                 | 3         | 3,3 %         |
| Dead                   | -         | 0 %           |
| <b>TOTAL</b>           | <b>91</b> | <b>100 %</b>  |

From Table 3, it can be seen that from 91 cases of abuse during the 2019-2020 period at Langsa Hospital, there were the number of male victims who got the

highest position in 57 cases (56.0%), while women had 34 cases (37.4%). Of all cases of maltreatment based on age group, the highest age group was at the age of 21-30 years with 29 cases (31.9%). While the frequency of abuse is based on the characteristics of the degree of injury suffered by the victim, there are the most groups with moderate degree of injury, namely 72 cases (79.1%).

### **Distribution of Domestic Violence Frequency Based on Characteristics**

Table 4. Distribution of Domestic Violence Frequency Based on Characteristics

| CHARACTERISTICS        | FREQUENCY | PERCENTAGE |
|------------------------|-----------|------------|
| Male                   | 3         | 17,6 %     |
| Female                 | 14        | 82,4 %     |
| Age :                  |           |            |
| < 11                   | -         | -          |
| 11-20                  | 1         | 5,9 %      |
| 21-30                  | 4         | 23,5 %     |
| 31-40                  | 7         | 41,2 %     |
| 41-50                  | 4         | 23,5 %     |
| >50                    | 1         | 5,9 %      |
| Degree of injury: Mild | 15        | 88,2 %     |
| Moderate               | 2         | 11,8 %     |
| Severe                 | -         | -          |
| Dead                   | -         | -          |
| Total                  | 17        | 100 %      |

From Table 4, it can be seen that of the 17 cases of Domestic Violence during the 2019-2020 period at Langsa Hospital, there were the number of female victims who got the highest position in 14 cases (82.4%), while there were 3 cases for males (17,6%). Of all cases of domestic violence based on age group, there are the most age groups at the age of 31-40 years with 7 cases (41.2%). While the frequency of domestic violence based on the characteristics of the degree of injury suffered by the victim, there was the highest group on the degree of minor injury, namely 15 cases (88.2%).

### **Distribution of Rape Frequency Based on Characteristics**

Table 5. Distribution of Rape Frequency Based on Characteristics

| Characteristics        | Frequency | Percentage |
|------------------------|-----------|------------|
| Male                   | -         |            |
| Female                 | 6         | 100 %      |
| Age :                  |           |            |
| < 11                   | 1         | 16,7 %     |
| 11-20                  | 5         | 83,3 %     |
| 21-30                  | -         |            |
| 31-40                  | -         |            |
| 41-50                  | -         |            |
| >50                    | -         |            |
| Degree of injury: Mild | 6         | 100 %      |

|       |          |       |
|-------|----------|-------|
|       | Moderate |       |
|       | Severe   |       |
|       | Dead     |       |
| Total | 6        | 100 % |

From Table 5, it can be seen that from 6 cases of rape during the 2019-2020 period at Langsa Hospital, there were all female victims because Indonesia does not recognize that the rape victim is a male, according to Article 285 of the Criminal Code which reads "Anyone with violence or threats of violence to force a woman to have sex with him outside of marriage, are threatened with rape with a maximum imprisonment of twelve years". From all cases of rape based on age group, there are the most age group at the age of 11-20 years as many as 5 cases (83.3 %). While the frequency of abuse is based on the characteristics of the degree of injury suffered by the victim, there is the highest group on the degree of minor injury, namely 6 cases (100%).

### **Distribution of Fornication Frequency Based on Characteristics**

Table 6. Distribution of the frequency of sexual crimes in the category of fornication based on characteristics

| Characteristics        | Frequency    | Percentage |
|------------------------|--------------|------------|
| Male                   | 1            | 3,7 %      |
| Female                 | 26           | 96,3 %     |
| Age :                  |              |            |
| < 11                   | 3            | 11,1 %     |
| 11-20                  | 24           | 88,9 %     |
| 21-30                  | -            |            |
| 31-40                  | -            |            |
| 41-50                  | -            |            |
| >50                    | -            |            |
| Degree of injury: Mild | 26           | 96,3 %     |
| Moderate               | 1 (pregnant) | 3,7 %      |
| Severe                 |              |            |
| Dead                   |              |            |
| Total                  | 27           | 100 %      |

From Table 6, it can be seen that of the 27 cases of fornication during the 2019-2020 period at Langsa Hospital, there were the number of female victims who got the highest position in 26 cases (96.3 %), while for men there were 1 case (3.7%). Of all cases of fornication based on age group, there are the most age group at the age of 11-20 years as many as 24 cases (88.9%). While the frequency of abuse is based on the characteristics of the degree of injury suffered by the victim, there is the highest group on the degree of minor injury, namely 26 cases (96.3 %).

### Distribution of Sodomy Frequency Based on Characteristics

Table 7. Distribution of Sodomy Frequency Based on Characteristics

| CHARACTERISTICS        | FREQUENCY | PERCENTAGE |
|------------------------|-----------|------------|
| Male                   | 3         | 100 %      |
| Female                 | -         | -          |
| Age :                  |           |            |
| < 11                   | 2         | 66,7 %     |
| 11-20                  | 1         | 33,3 %     |
| 21-30                  | -         | -          |
| 31-40                  | -         | -          |
| 41-50                  | -         | -          |
| >50                    | -         | -          |
| Degree of injury: Mild | 2         | 66,7 %     |
| Moderate               | 1         | 33,3 %     |
| Severe                 |           |            |
| Dead                   |           |            |
| Total                  | 3         | 100 %      |

From Table 7 it can be seen that of the 3 cases of Sodomy during the 2019-2020 period at Langsa Hospital, there were 3 cases of all male victims (100%). Of all cases of sodomy based on age group, the most age group was <11 years old with 2 cases (66.7%). While the frequency of sodomy based on the characteristics of the degree of injury suffered by the victim, there was the highest group on the degree of minor injury, namely 2 cases (66.7%).

### Discussion

Based on research data from 295 cases with four variations of forensic cases handled at Langsa Hospital in 2019-2020 it was found that traffic accident cases were the most cases, namely 151 cases, with the most victims being men, this data is a sufficient number. Greater than the traffic accident cases handled at Dr.Mohammad Hoesin Hospital Palembang based on research conducted by Indra Syakti Nasution and colleagues based on data from the 2011-2013 service year for three years with a total of 184 cases.

Most of the victims were male, both at Langsa Hospital and at Dr.Mohammad Hoesin Hospital Palembang, this can be understood because men work more outside the home than women who mostly work inside the house, so the risk of traffic accidents is higher, large in men. There were 91 cases of abuse in this study with various forms of violence, this data shows a small number compared to the research conducted by Tymothy Gershon Situmorang with the title "Prevalence of Mechanical Trauma in Living Victims in DR.R.M Djoelham Binjai Hospital in 2019", with a total of 141 cases in one year.

There were 36 cases of sexual crime in this study, this figure is quite small when compared to cases handled at Bhayangkara Hospital Level III Manado for the period January 2017-December 2019 (3 years) as many as 305 cases based on research conducted by Aditya P and others in 2020.

There were 17 cases of domestic violence in this study, researchers have not found any research related to domestic violence served in hospitals. Research by Mery. R and Fitri Y in 2013-2014 in the district of South Padang, Padang City found as many as 244 cases. So according to the researcher, there are actually quite a number of cases of domestic violence in the city of Langsa because cases of domestic violence follow the pattern of the iceberg phenomenon where every one case reported to the police is actually ten cases that were not reported for various reasons such as embarrassment, showing family disgrace and so on.

### **Conclusion**

Based on the results of the study, it was concluded that the prevalence of forensic cases in 2019 to 2020 Langsa Hospital handled 295 forensic cases, with a variety of cases, namely traffic accidents as many as 151 cases (51.2%) as well as the most cases handled. Cases of abuse with the number of cases 91 (30.9%). Cases of sexual crimes with a total of 36 cases (12.2%). Cases of domestic violence as many as 17 cases (5.7 %).

Traffic accident cases, most of the victims are male, aged 11-20 years, with moderate degree of injury. cases of abuse, most of the victims are male, aged 21-30 years, with moderate degrees of injury. In cases of Domestic Violence, the most victims are women, aged 31-40 years, with minor injuries. Rape cases with female victims aged 11-20 years, with minor injuries. Fornication cases, the most victims are women, aged 11-20 years, with minor injuries. In the case of Sodomy, most of the victims were male, aged <11 years, with minor injuries.

### **Suggestion**

Based on the number and variety of cases above, the researcher suggests that Langsa Hospital should be considered as a place for forensic specialist education programs.

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