

# Gender Aspects of Postasphyxia Conditions

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**Abstract** The materials of forensic medical examinations on post-psychiatric cases conducted in three regions of the country in 2017-2020 were analyzed. They accounted for 0.31% of all live examinations. 42.5% of the victims were women and they were mainly between the ages of 19-39. Women used a scarf made of a softer material than men. Cases of unconsciousness were more common in women, but the proportion of those who lost consciousness for a longer period of time was greater in men. At present, no significant differences in the duration of asphyxia, seizures, subconjunctival ecchymoses, observation of amnesia and the development of deep coma were observed in members of different sexes.

**Keywords** Forensic examination, Mechanical asphyxia, Postasphytic condition

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## 1. Introduction

Recently, the issues of ensuring gender equality and prevention of gender-based violence in all spheres of social life have become relevant. Therefore, in solving this problem, it is important to study the current situation in this area. Therefore, in the specialized literature there is a lot of scientific research on this topic in various fields. [2,8,9,10]

According to the current legislation, the damage to human health and life caused by various types of social conflicts is the subject of forensic medical examination. These include health problems and deaths as a result of oxygen deficiency. Various aspects of nonlethal asphyxia, in particular the gender characteristics of postasphytic cases, have not been adequately studied by researchers on forensic materials [1,6,7].

In 2017-2020, the materials of examinations of living people on post-psychiatric cases conducted in three regions of the country (Andijan, Fergana region and the city of Tashkent) were analyzed.

During this period, 456 such examinations were conducted, which accounted for 0.31% of the total number of examinations of living persons. From the materials of forensic medical examination in all cases, details of the incident from the submitted medical documents, place and time of the incident, type, characteristics and duration of asphyxia, clinical course of post-asphyxia, medical care, injuries and other changes in the victims, examination process the data of the consultations of clinicians, the criteria

used in the forensic determination of the severity of bodily injuries were studied in detail. Special cards containing about 30 characters were filled out for each case. The characters were digitized and a database was created for statistical processing. The results of the study were statistically processed using a special computer program.

In the years of analysis, the ratio of forensic examination of living persons and corpses associated with asphyxia in the three regions forensic medical institutions averaged 1: 6.6, and this figure differed (from 1: 3.4 to 1: 13.3) significantly between regions, over the years.

## 2. The Main Results and Findings

Women accounted for 42.5% of the victims. About three-quarters of them were between the ages of 19-39 (74.2%). In men, the figure was 58.1%.

In the age group, 52.6% of 19-29 year olds were women, while the share of women under 15 years of age and 50 and older was much lower (9.5% and 13.2%, respectively) (Figure 1).

According to the details of the incident, all cases were associated with strangulation asphyxia, with hanging in 84.0%, manual suffocation in 15.6%, and suffocation in 2 cases. No significant differences in gender cross-section were identified in this regard.

In the majority of cases (84.4%), strangulation of the neck was performed with a splint. According to the materials of the examination, in 67.3% of cases, the sling was made of semi-rigid, in 27.6% - soft, in 5.1% - of hard material. Significant differences were found in different genders in this regard. In particular, in 40.3% of women, the ridge was

made of soft material, while in men the figure was 18.3% (Fig. 2).

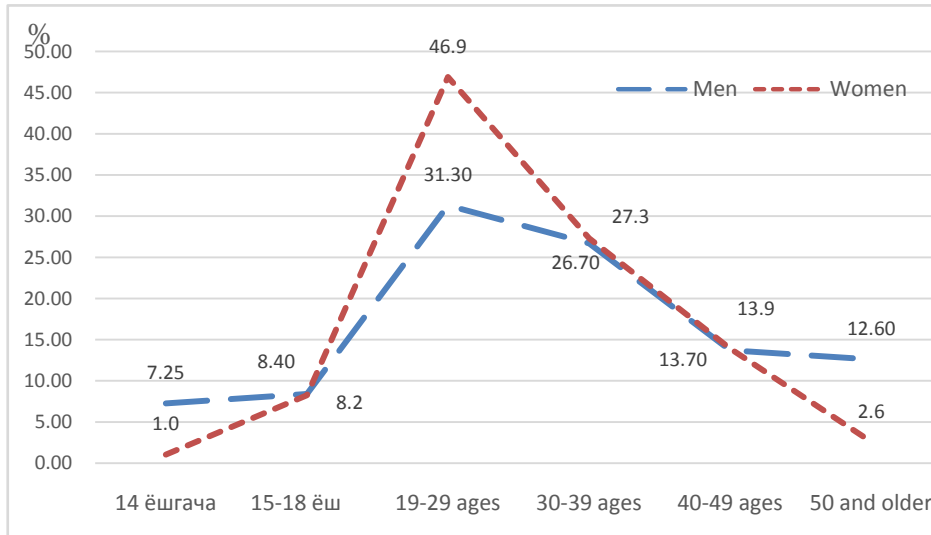


Figure 1. Representatives of different genders by age groups

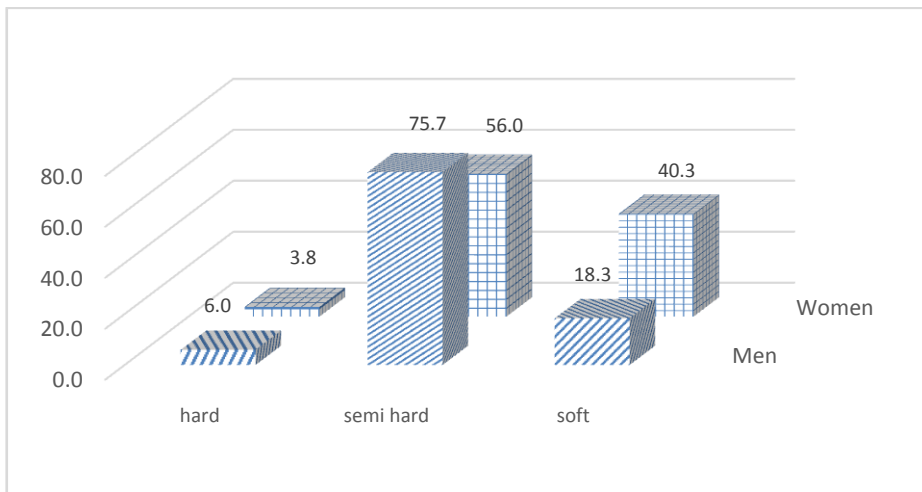


Figure 2. Types of lining material in men and women

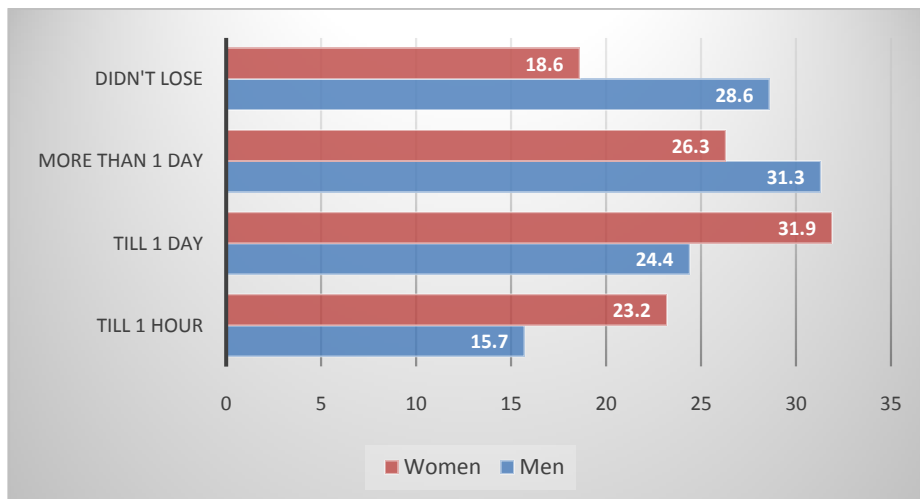


Figure 3. Duration of loss of consciousness in members of the opposite sex

The extent of the pathological changes observed in cases of incomplete asphyxia, the degree of severity, among other factors, is related to the duration of the asphyxia effect.

During the analysis, information about this was obtained from various sources (medical documents, expert examination of the victim and their relatives). According to the results of the analysis, in 20.1% of cases the asphyxia effect lasted up to 30 seconds, in 22.7% - 31-60 seconds, in 57.2% - more than a minute. There was no significant difference between men and women in this regard.

93.0% of the victims sought medical attention after the accident, of which 84.2 were treated in an inpatient setting. Of the total inpatient treatment, 62.3% were treated for 2-7 days, and 26.0% for a longer period. The remaining victims were in the hospital for up to 24 hours. The incidence of women treated for one day in the genital section was 9.1% lower than that of men (13.6%), while those who received inpatient treatment for 8 days or more were slightly larger (27.4% and 25.0%, respectively).

Forensic assessment of the severity of bodily injuries in post-psychiatric cases focuses on the symptoms associated with impaired brain function. In particular, such symptoms include unconsciousness, amnesia, convulsions of various types in the victims. According to the results of the analysis, 75.7% of the victims lost consciousness for various periods after asphyxia. In women, the figure was 81.4%, and in men - 71.4%. More than half of the women (55.1%) and 40.1% of the men lost consciousness within a day.

At the same time, prolonged loss of consciousness is more pronounced in men. (Figure 3).

According to medical records and expert examination, 58.1% of the victims had tonic, tonic-clonic seizures, 55.7% - \* amnesia, mainly retrograde, hemorrhages of various sizes in the mucous membranes of the eyes and eyelids. Observations of these traits did not differ significantly in cross-section of representatives of different sexes.

In 50.9% of the total observations, second- to third-degree coma was reported in the victims, in which case severe bodily injuries were identified as a sign of life-threatening condition. In the remaining cases, the criterion of the duration of the health disorder was used to determine the severity of bodily injuries. There was no convincing difference between men and women in this regard either.

According to the World Health Organization, suicide attempts are 20 times more common than fatal cases [3]. Meanwhile, researchers have pointed out that self-immolation is one of the most common methods of suicide. In contrast, according to forensic materials, deaths from mechanical asphyxia were on average 6-7 times higher than cases of nonlethal asphyxia. This situation indicates the incomplete coverage of cases of incomplete asphyxia with forensic medical examination for various reasons (concealment of the incident by citizens, non-disclosure, failure to report to law enforcement agencies, etc.) [4].

According to the examination materials, 42.5% of post-psychiatric cases occurred in women, and the majority of them (74.2%) in the group of individuals aged 19-39 years

had a significantly lower share of women. In 67.3% of the cases, the ligament was made of semi-rigid, in 27.6% - soft, in 5.1% - hard material, and in women the ligament made of soft material was more common than in men.

As a result of asphyxia, more women than men lost consciousness, and more than half of them had a duration of loss of consciousness of up to one day. At the same time, the proportion of men who lost consciousness for a longer period of time (more than a day) was higher.

In 93.0% of the observations, the victims sought medical attention after the incident and most were treated in an inpatient setting. In women, the proportion of those treated longer was slightly higher.

### 3. Conclusions

According to the results of the analysis, there was no significant difference in the duration of asphyxia in different sexes, the presence of tonic, tonic-clonic seizures, amnesia, detection of subconjunctival ecchymoses, the development of deep coma. The data obtained are consistent with the results of other studies conducted on postasphytic conditions (1.5).

Based on the results of the analysis of forensic materials conducted in post-psychiatric cases, the following conclusions can be drawn:

1. 42.5% of the victims of incomplete asphyxia were women, and they were mainly between the ages of 19-39. In other age groups, the proportion of women was much lower.
2. Women were more likely than men to wear a soft material scarf.
3. Cases of unconsciousness were more common in women, and in more than half of them the duration of the period of unconsciousness was up to one day. In men, the proportion of those who lost consciousness for a longer period of time was greater.
4. There were no significant differences between the sexes in the duration of asphyxia, seizures, subconjunctival ecchymoses, observation of amnesia, and the development of deep coma.

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