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ON THE URGENT NEED TO INTRODUCE NEW TYPES OF CAR INJURIES TO THE CLASSIFICATION

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Abstract: The article examines the state of the issue of car injury examination. An analysis of the frequency of occurrence of generally accepted types of car injury showed that, simultaneously with the quantitative growth of this type of transport injury in recent years, there have been cases of road accidents in which the resulting injuries do not correspond to the existing types and variants of car injury. This applies to the overturning of a car at speed and on a turn and to the moving compression of a pedestrian's body between the parts of the bottom and the road surface, which occurs when the victim's body is inside the track of a moving car.

Keywords: car, rollover, method, treatment, moving crush.

INTRODUCTION

According to WHO, mortality from mechanical trauma ranks third among all fatal outcomes and first among people under 40 years of age [1]. Among mechanical impacts, first place is occupied by hard blunt objects. Most often, blunt injuries occur in car accidents [2]. In recent years, about 55 million car accidents have occurred annually in the world, in which about 1.2 million people die and 8 million receive injuries of varying severity [3]. And these figures are increasing annually.

MATERIALS AND METHODS

The generally accepted forensic classification of types and variants of car injuries was developed and proposed in the 60s of the last century [4] and is still widely used in expert practice. This classification includes the following types of car injuries:

- collision of a moving car with a person;

- falling out (of a passenger, driver) from a moving car;

- running over (a pedestrian) by a car wheel;

- injury in the cabin (salon) of a car (passenger, driver);

- injury resulting from compression of the body (of a pedestrian, driver, passenger) between parts of a car and other objects or obstacles;

- combined types of car injuries:

- collision of a moving car with a person followed by running over by a wheel;

b) falling out of a passenger or driver from a moving car followed by running over by a wheel;

c) injury to the driver or passenger in the cabin (salon) of a car, followed by falling out of the car and being run over by a wheel;

d) falling out of the driver or passenger from the car, followed by being crushed by parts of the overturned car, etc.

RESULTS AND DISCUSSION

Compliance with these requirements allows the expert to identify all injuries, determine the type of car injury, the phases of a specific type, and the position of the victim's body in each phase by their nature, location, and morphological features. However, practice shows that in



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recent years, expert observations have begun to occur when the injuries identified during the study do not correspond to the generally accepted types and variants of car injury. This applies to fatal and non-fatal injuries inside the car when it rolls over. Rollover can occur both after a collision of a moving car with an obstacle, and on a turn as a result of loss of stability. The issue of car rollover is relevant in the United States, where 10,000 people die every year as a result of this type of injury. This problem is addressed by the National Highway Traffic Safety Administration (NHTSA), which has published a rating of the probability of car rollovers in an accident.

NHTSA experts assess the degree of rollover risk by the ratio of the width of the car's wheels to the center of mass, and the wider the track and the lower the center of mass, the greater the stability. Depending on the stability indicators, cars are divided into five categories. The most stable receive five stars (the probability of rollover is less than 10%), one star - the least stable (more than 40%). Testing a car involves making a risky maneuver at a speed of 55-80 km / h. The most stable were cars and some minivans, less stable - pickups, SUVs. According to American statistics, 90% of rollover cases are associated with a loss of concentration by drivers. One of the typical cases is when the driver "does not notice" the turn and drives off into a ditch. The second option is associated with a strong turn of the steering wheel when driving onto the right shoulder. In this case, the car on the asphalt moves sharply towards the opposite shoulder, followed by a rollover.

You should also not turn the steering wheel back sharply to correct the skid - the car may roll over on the right shoulder.

A rollover can occur when one or two wheels go into a deep shoulder (ditch), most often during a turn under the action of centrifugal force due to high speed. When a wheel (wheels) goes down into a ditch, the overall center of gravity shifts outward. The car ends up in an unbalanced state, and even a small impulse of lateral force causes a deep roll and rollover.

However, in most cases, the cause of the rollover is the driver's own actions. Trying to get out of the ditch and return the car to the roadway, the driver makes two mistakes at once: "closes the gas" and turns the wheels towards the road. These actions give the rotational impulse that rolls the car over. Even more dangerous is sudden braking while maneuvering in a ditch, especially in cases where there is a stop (obstacle) on the side.

There are four types of critical situations that lead to lateral rollover.

1. Hitting the side support with the rear wheel when the car is rotating, or skidding rhythmically or critically.

2. Sliding the rear wheel into a ditch.

3. Sliding the front outer wheel into a ditch.

4. Throwing up the inner front wheel while turning.

CONCLUSION

An analysis of the state of the art of car injury examination has shown that the currently accepted classification of car injury does not meet the needs of today's expert practice. Given the constant increase in the number of SUVs in the areas, the number of injuries inside the car is growing when overturning at speed on a turn, when driving into a ditch with subsequent overturning. Similarly, given the low location of the underbody parts of cars and some bus models, the number of crossings is growing, when some of the damage is caused by the action of the wheel, the other - by contact with the underbody parts of the car (with a transverse position



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of the pedestrian's body relative to the track of movement), or when all the damage occurs from moving compression between the underbody parts and the road surface (provided that the victim's body is located inside the track and along it).

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