



Cardiopulmonary Resuscitation

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Abstract: In this article we will talk about resuscitation in cardiac arrest. With sudden cardiac arrest and respiratory interruption, the vital activity of the body is disrupted, a state of clinical death develops.

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At the turn of the XX-XXI centuries, the world medical community, the world's leading resuscitators came to the conclusion that it was necessary to improve the results of resuscitation (revival) of patients with sudden cardiac arrest. Despite the widespread introduction of modern resuscitation methods at the end of the twentieth century, the expected significant increase in patient survival was not obtained. According to a number of experts, this was the result of excessive enthusiasm for new pharmaceuticals, alternative resuscitation protocols, and the lack of clear priorities in the protocols for reviving patients. It was noted that as a result, due to the change in priorities of the revival tactics, the time of indirect heart massage from the total time of cardiopulmonary resuscitation decreased from 83% to 30-55%. Because of this, at the turn of the century, a new view was formed on many previously published experimental and clinical studies.

Emergency care and the beginning of resuscitation measures allow you to restore breathing, blood circulation, heartbeat and oxygenation of the body. First aid consists of checking consciousness, breathing, calling an ambulance, conducting cardiopulmonary resuscitation, consisting of indirect massage and artificial lung ventilation (ventilator).

5 main symptoms will witness that a person's heart has stopped. These symptoms include:

1. Loss of consciousness. The patient stops responding to sounds and various kinds of stimuli;
2. Lack of pulse. You can check this on the carotid (or radial) artery. To do this, the index and middle fingers are applied to the neck a couple of centimeters from prominent cartilage.
3. Respiratory arrest. It can be judged by the absence of characteristic chest movements;
4. Dilated pupils. To do this, you will need to lift the upper eyelid and shine a flashlight into your eyes. When the pupils are greatly dilated and do not respond to light, this is an alarming sign.
5. Skin with a bluish or light gray tint. This is especially characteristic of the facial area (cyanosis of the face, lips).

The main signs of clinical death are: lack of breathing and palpitation, loss of consciousness, dilation of pupils, and lack of reaction to external stimuli. To accurately determine the severity of the situation, it is necessary to determine the following indicators of the victim:

Check the pulse on the carotid arteries at the angle of the jaw; examine the chest, check for respiratory movements; check the victim's breathing, and what is very important - pay attention to the skin color - cyanosis appears when breathing stops;

The consciousness check is carried out according to the following principle: to address the victim loudly. Ask him how he feels. If there is no reaction, use painful stimuli. Squeeze the upper edge of the trapezius muscle or press the base of the nose. If there is no reaction, then there is no consciousness, you can proceed to the next stage.

Breathe check: Tilt the victim's head back (holding the back of his head and chin) and open his mouth. Inspect it for the presence of foreign objects. If they are present, delete them. Check your breathing.

Stages of cardiopulmonary resuscitation:

1. It is necessary to lay the patient on a flat horizontal surface.
2. If possible, lift his legs.
3. Release the chest from the clothes, unbutton the belt other items of clothing, tighten the chest and stomach;
4. It is necessary to determine the area where the indirect heart massage will be performed. It is necessary to press on the chest 3-5 cm above the xiphoid process and strictly along the middle line. In men, this area can be determined by drawing a line along the nipples. Where this line intersects the chest and will be the desired point.
5. Indirect heart massage. Stand to the side of the victim. Place the base of the palm in the center of the chest, place the other hand on top of the first and interlace the fingers in the lock. Without bending your arms at the elbows, press on the sternum to a depth of 4-5 cm with the weight of your torso. The compression rate should be about 100 clicks per minute. After each pressing, the chest should be freed from compression. The beats should be sharp and rhythmic. Fingers should be raised!
6. After 30 compressions, it is necessary to switch to artificial lung ventilation. To do this, you need:
Gently tilt your head back, pull your chin up and examine the oral cavity for the presence of foreign bodies. After that, cover your mouth with a napkin or gauze. Next, hold the nose with two fingers and exhale vigorously into the victim's mouth, tightly wrapping his mouth with his lips. It is important to observe the rise of the chest. After two exhalations, we start the indirect heart massage again.

Let's summarize the main rules:

- ✓ If one lifeguard provides assistance, then 2 breaths - 15 pressures.
- ✓ If two rescuers provide assistance, then 1 breath - 5 pressures.
- ✓ If there is a third rescuer, he lifts the victim's legs for better blood flow to the heart.

A number of rather rigidly formulated provisions in the latest recommendations of the ANA on the conduct of CPR are designed to unify approaches to it, relatively simplify the algorithms for carrying out measures within the framework of basic and extended care and, ultimately, lead to an increase in the effectiveness of CPR and an increase in the number of patients who survived after circulatory arrest. But at the same time, the strict formulation of a number of provisions on the conduct of the SPR

entails difficulties. It is difficult not only for an untrained resuscitator, but also for trained personnel of intensive care units, emergency medical teams (SMPS) to withstand the strict modern standards of emergency care. The need to maintain a high rate of chest compressions, the depth of compressions, the duration of the performed manual, even with an ideal technique of execution, lead to a rapid depletion of the strength of the person providing this resuscitation aid. A number of studies prove that the effectiveness of manual indirect heart massage can decrease dramatically - often after just one minute - due to the effect of fatigue of the conducting SPR. Hence, the quality of resuscitation measures inevitably decreases and, accordingly, the probability of a favorable outcome decreases.

The recommended change of roles in the resuscitation team, the alternation of persons involved in cardiopulmonary resuscitation, only partially solves the problem. Often, some kind of confusion, confusion is inevitable when performing the manual by several persons. The role of coordinator becomes mandatory, which must be assumed either by the most experienced member of the resuscitation team, or by the person who first started resuscitation measures.

Another aspect that affects the quality of emergency care should be noted here. It is with regret that we have to admit that the level of preparedness of graduates of medical universities, doctors, employees of special services (Ministry of Emergency Situations, police, fire protection), the public as a whole regarding the necessary measures to maintain life is low. There is a lack of both the necessary "internal readiness" to provide resuscitation aids, and the necessary level of theoretical and practical skills and abilities. Of course, and this is reflected in international recommendations, but the outcomes resuscitation is better if the resuscitation aid is still provided (albeit with inadequate quality) than when resuscitation is not carried out at all.

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