SEMINAR FOR PHYSICIANS
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University of Novi Sad, Faculty of Medicine Novi Sad[1]
Institute of Cardiovascular Diseases of Vojvodina, Sremska Kamenica[2]
Institute of Oncology of Vojvodina, Sremska Kamenica[3]
University Clinical Center of Vojvodina, Novi Sad[4]

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DO NOT ATTEMPT CARDIOPULMONARY RESUSCITATION – ETHICAL ASPECTS

ODLUKA O NEZAPOČINJANJU KARDIOPULMONALNE REANIMACIJE – ETIČKI ASPEKTI

Mihaela PREVEDEN[1, 2], Nataša MARKOVIĆ[1, 4], Andrej PREVEDEN[1, 2], Ranko ZDRAVKOVIĆ[2, 4], Vanja DROBNJAK[2] and Milanka TATIĆ[1, 3]

Summary

Introduction. "Do Not Attempt Cardiopulmonary Resuscitation" is a clear decision not to initiate resuscitation in the final stages of the disease. This decision shall be made if it is assessed that health will not be improved after resuscitation, and it can be made by the patient, family, or the medical team. **Informed patient consent - "Code status".** Informed patient consent or "Code status" refers to the type of medical treatment the patient wants medical personnel to apply or not to apply in case of cardiac arrest. Patients make a decision about no resuscitated while they are in a situation to consciously make decisions, or authorize family members or guardians to make and implement such a decision for them. There might be a problem with patients and their families not fully understanding the meaning and the process of resuscitation, the prognosis, risks, and consequences. They do not understand the terms of short-term and long-term survival rates and post-resuscitation quality of life. **Do not attempt Cardiopulmonary Resuscitation.** According to the current guidelines from the European Resuscitation Council, a joint decision on cardiopulmonary resuscitation planned in advance should be the first priority from the ethical standpoint. The decision-making team should take into account the patient's wishes when making the decision about cardiopulmonary resuscitation, thus, the end-of-life discussions with patients are necessary. **The practice of ethics.** It is necessary to know when to start and when to stop with cardiopulmonary resuscitation. Several criteria need to be taken into account when making a decision not to initiate cardiopulmonary resuscitation. One unambiguous criterion is the safety of the rescuer. **Conclusion**. Continuous research is also needed to improve knowledge in this area and facilitate decision-making and improve post-resuscitation survival and quality of life for these patients.

Key words: Cardiopulmonary Resuscitation; Ethics; Decision Making; Resuscitation Orders; Death; Critical Illness

Sažetak

Uvod. *Do not attempt Cardiopulmonary Resuscitation* predstavlja jasnu odluku o nezapočinjanju reanimacije. Ta odluka se donosi ukoliko je procena da nakon reanimacionog postupka neće doći do unapređenja zdravlja; mogu je doneti pacijent, porodica ili medicinski tim. **Informativni pristanak pacijenata.** Informativni pristanak pacijenta ili *Code status* podrazumeva vrstu medicinskog tretmana koju pacijent želi da medicinsko osoblje primeni ili ne primeni u slučaju srčanog zastoja. Pacijenti donose odluku o nereanimiranju dok su u situaciji da svesno donose odluke ili daju ovlašćenje članovima porodice ili starateljima da umesto njih donesu i sprovedu tu odluku. Problem može biti to što pacijenti, kao i njihove porodice ne razumeju u potpunosti značenje i postupak reanimacije, prognozu, rizik i posledice. Ne razumeju termine kratkoročnih i dugoročnih stopa preživljavanja i postreanimacionog kvaliteta života. **Odluka o nezapočinjanju resustitucije.** Prema trenutnim smernicama Evropskog saveta za reanimaciju (*European Resustitation Council*), sa etičkog aspekta, na prvom mestu treba da postoji unapred isplanirana zajednjička odluka o kardiopulmonalnoj reanimaciji. Tim koji odlučuje treba prilikom donošenja odluke o kardiopulmonalnoj reanimaciji da uzme u obzir želje pacijenta, stoga je potrebno sa pacijentima blagovremeno razgovarati (*end-of-life-discussions*). **Etička praksa.** Potrebno je znati kada započeti i kada prestati sa kardiopulmonalnom reanimacijom. Prilikom donošenja odluke da se ne započne kardiopulmonalna reanimacija potrebno je uzeti u obzir nekoliko kriterijuma. Jedan nedvosmislen kriterijum je bezbednost spasioca. **Zaključak**. Potrebna su stalna istraživanja kako bi poboljšali saznanja na ovu temu radi lakšeg donošenja odluke i boljeg postreanimacionog preživljavanja i kvaliteta života ovih pacijenata.

Ključne reči: kardiopulmonalna resuscitacija; etika; odlučivanje; instrukcije za reanimaciju; smrt; kritično oboleli

Introduction

Cardiopulmonary resuscitation (CPR) is a life-saving technique that consists of a series of procedures performed during cardiac arrest of various causes [1, 2]. Cardiac arrest can be sudden, reversible, and requires all resuscitative measures, and should be distinguished from cardiac arrest that occurs in the terminal stages of chronic diseases. In these situations, a positive outcome and adequate quality of life after resuscitation are usually not expected [3–5].

Corresponding Author: Dr Mihaela Preveden, Medicinski fakultet Novi Sad, Institut za kardiovaskularne bolesti Vojvodine, 21204 Sremska Kamenica, Put doktora Goldmana 4, E-mail: mihaela.preveden@mf.uns.ac.rs, mihaela.detki@gmail.com

Abbreviations
CPR – cardiopulmonary resuscitation
DNACPR – Do Not Attempt Cardiopulmonary Resuscitation
ERC – European Resuscitation Council
ALS – advanced life support

Chronic illnesses associated with low resuscitation success or poor post-resuscitation quality of life are terminal stages of cancer, multiple organ dysfunction involving three or more organ systems, severe kidney and liver failure, and terminal stages of Aquired imunodeficiency syndrome [6]. There is a significant controversy surrounding resuscitation of patients after suicide attempts and resuscitation of COVID-positive patients in the terminal stages of the disease [7–9]. Nevertheless, from both medical and ethical points of view, the only justified decision not to initiate CPR is the assessment that resuscitation will not benefit the patient.

Cardiopulmonary resuscitation aims to preserve life, improve health, and reduce suffering [10]. Therefore, the most important thing in the terminal stages of these diseases is to assess the post-resuscitation quality of life [11]. Advanced medical techniques enable life extension at any cost, even at the cost of a poor quality of life [12]. Quality of life can be assessed based on five components: 1) assessment of mental status; 2) assessment of physical status (independent, moderately dependent, fully dependent); 3) assessment of socialization (integrated, isolated); 4) assessment of pain intensity (no pain, minimal pain, moderate, severe pain); 5) assessment of depressive behavior (no depression, moderate, or severe depression) [11, 12].

In many Western countries, there is a clear decision not to initiate resuscitation in the final stages of the disease, known as "Do Not Attempt Cardiopulmonary Resuscitation – DNACPR". This decision is made if it is assessed that health will not be improved after resuscitation. It can be made by the patient, family, or medical team [13–15].

Informed Patient Consent – "Code status"

Informed patient consent or "Code status" refers to the type of medical treatment that the patient wants medical personnel to apply or not to apply in case of cardiac arrest. As the patient cannot make this decision if there is a cardiac arrest, it should be made in a timely manner, in patients in the terminal stages of the disease, while they are still in a situation to make the decision independently and wisely [16, 17].

In 1974, the American Medical Association first recommended the existence of a document where patients would state whether they wanted to be resuscitated in the terminal stage of a chronic illness. The DNACPR became hospital practice for the first time in 1976, changing the previous policy that CPR must be routine practice after every cardiac arrest, regardless of cause and consequences [18, 19]. Patients make the decision about not being resuscitated while they are in a situation to consciously make decisions, or authorize family members or guardians to make and implement such decision for them [1, 18, 19].

The problem may be that patients, as well as their families, do not fully understand the meaning and the process of resuscitation, the prognosis, risks, and consequences. They do not understand the terms of short-term and long-term survival rates, post-resuscitation quality of life, and how survival from resuscitation measures would affect the patient's functional status [16, 20, 21]. Therefore, the responsible healthcare worker must explain to the patient the consequences of refusing the proposed medical measure, and require from the patient a written statement about it, which must be kept in medical documentation [1, 21].

The Patient Rights Act of the Ministry of Health of the Republic of Serbia allows for the possibility that patients with cancer or another chronic disease can express their opinions on therapeutic measures to be taken in the event of cardiac arrest during treatment, but this is not the practice in most healthcare facilities [22]. Also, in addition to legal acts, the doctor is obliged to adhere to the Code of Professional Ethics of the Serbian Medical Chamber, which deals with the doctor's relationship to the expressed will of the dying person [23].

Do Not Attempt Cardiopulmonary Resuscitation

Do-Not-Attempt-Cardiopulmonary-Resuscitation refers to a pre-planned decision not to initiate CPR in order to align the patient's wishes with their treatment. The general recommendation is that not all patients should be resuscitated, and this recommendation considers both the ethical and medical perspectives [24]. From the medical perspective, the possibility of poor outcome and poor post-resuscitation quality of life in certain patients is taken into account, which outweighs the benefit of resuscitation for that patient [25, 26]. From the ethical perspective, many authors argue for the individual's right to die. However, in practice, it is difficult to know which individual will have severe consequences from CPR that will affect their quality of life.

Assessment of each individual is subjective, and there is often disagreement among team members about the outcome assessment [1, 12]. The patient and their family can also define futility of resuscitation quite differently from medical staff. Besides professional and moral responsibility, bias, fear, guilt, demographic and religious beliefs can also influence the decision. Due to all of these factors, is extremely difficult in some situations to make the decision about not initiating the resuscitation and the futility thereof [27].

In any case, the medical act must be a combination of the patient's free will, ethical norms, and legal acts [25, 27]. In the current guidelines of the European Resuscitation Council (ERC) from 2021, there is an entire chapter on the ethical aspects of resuscitation. Their purpose is to provide ethically correct evidence-based recommendations on the decision not to initiate resuscitation, as well as the decision to stop

Table 1. Key ethical messages for resuscitation according to European Resuscitation Council guidelines 2021 [1]
Tabela 1. *Ključne etičke poruke za reanimaciju prema vodiču Evropskog saveta za reanimaciju 2021 [1]*

1. Pre-planned care – Help patients and families achieve outcomes that are important for them – Allow clinicians and patients to participate in shared decision making – Integrate DNACPR decisions with emergency care treatment plans *1. Unapred isplanirana nega* *– Pomoći porodicama pacijenata da postignu ishode koji su važni za njih* *– Omogućiti kliničarima i pacijentima da učestvuju u zajedničkom donošenju odluka* *– Integrisati odluke o nezapočinjanju kardiopulmonalne reanimacije sa planovima lečenja urgentne nege*
2. Educating patients and general public – What does resuscitation include and what are the outcomes after resuscitation – How to inform clinicians about the outcomes that are important to them *2. Edukacija pacijenata i javnosti* *– Šta resuscitacija obuhvata i koji su ishodi nakon resuscitacije* *– Kako da obaveste kliničare o ishodima koji su njima važni*
3. Educating healthcare professionals – About the importance of pre-planned care – What does shared decision making include – How to properly discuss the pre-planned care with the patient's family *3. Edukacija zdravstvenih radnika* *– O važnosti unapred isplanirane nege* *– Šta obuhvata zajedničko donošenje odluka* *– Kako adekvatno razmatrati unapred isplaniranu negu sa porodicom pacijenta*
4. When to initiate and discontinue resuscitation – Use clearly specified criteria for suspending and terminating CPR – Do not base the decisions on isolated clinical signs or markers of poor prognosis – Document the reasons for decision- making regarding CPR *4. Kada započeti i prekinuti resuscitaciju* *– Koristiti unapred definisane kriterijume za obustavljanje i prekidanje kardiopulmonalne reanimacije* *– Ne bazirati odluke na izolovanim kliničkim znacima ili markerima loše prognose* *– Dokumentovati razloge za donošenja odluka u vezai sa kardiopulmonalnom reanimacijom*
5. Research – Involve patients and public in the design, implementation and interpretation of research – Respect the dignity and privacy of research subjects – Comply with recommendations during research implementation *5. Istraživanje* *– Uključiti pacijente i javnost u dizajniranje, sprovođenje i tumačenje istraživanja* *– Poštovati ugled i privatnost ispitanika* *– Poštovati preporuke tokom sporvođenja istraživanja*

it. As already mentioned, the ethical approach to resuscitation should certainly be based on the assessment of balance between benefits and harms. It also promotes an equitable approach to all patients, regardless of the routine practice of the institution where the patient is located [1, 27].

The Practice of Ethics

According to current ERC guidelines, from the ethical standpoint, the first priority for patients suffering from life-limiting illness should be a pre-planned joint decision on CPR in case of cardiac arrest. A life-limiting illness is an active, progressive, or advanced disease, that has little or no prospect of cure and that one is likely to die from at some point. The decision-making team should take into account the patient's wishes when making a decision about CPR, so timely discussions with patients (end-of-life discussions) are necessary [1, 20].

To make an adequate decision, patients and families need to be educated about the indications for CPR, the procedure, and potential outcomes. In addition, appropriate education of medical staff is necessary [28]. According to the above guidelines, it is necessary to know when to start and stop CPR. This, among other things, involves predetermined criteria for stopping CPR **(Table 1)** [1, 21, 27].

Several criteria need to be taken into account when making a decision not to initiate CPR, whether in-hospital or out-of-hospital [2]. One unambiguous criterion is the safety of the rescuer. If endangered, CPR should not be initiated. Also, CPR should not be initiated if there is obvious fatal injury or irreversible death, and the third unambiguous criterion is an order from a superior team member not to initiate or discontinue CPR. Other additional criteria considered when deciding not to initiate or discontinue CPR include the duration of CPR – if asystole is present for more than 20 minutes despite all the ad-

vanced CPR measures (Advanced Life Support – ALS). Another criterion is the presumption that further resuscitation will lead to harmful consequences for the patient that outweigh the benefits the patient would have had from resuscitation [2, 27].

Conclusion

Continuous research is needed to improve knowledge in this area in order to facilitate decision-making and improve post-resuscitation survival and quality of life for these patients.

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