RESUSCITATION ETHICS IN ROMANIA: DO NOT ATTEMPT RESUSCITATION ORDERS. FACTS AND PERSPECTIVES

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Abstract: *The cardiac arrest is an unfortunate event that ends the life of every human being. Sometimes, it is a predictable event in the evolution of chronic diseases, sometimes, it occurs as a complication of recently installed suffering. Trying to resuscitate the victim of cardiac arrest is a daily objective for the members of the emergency medical system (EMS), but decisions and gestures that initiate and conduct resuscitation may be subject to ethical issues. There are no regulations regarding the end of life decisions in Romania. So, in emergency cases, the medical personnel try to preserve the patient's life by all means available. These gestures may prove to be futile and expensive. Emergency medical systems personnel may have clinical skills and moral abilities to decide whether or not to initiate CPR. But some factors, such as family pressure, lack of specific regulations, can cause futile resuscitation or even "slow codes". Many out of hospital cardiac arrests have been witnessed, but bystanders were not trained in CPR and did not perform CPR until EMS arrival. This shows the need for education in our country in the field of resuscitation. In patients who survive after a cardiac arrest, the drama goes on beyond the return of spontaneous circulation. Because of hypoxia, varying degrees of neurological sequelae occur, or even brain death. Most of these patients require constant care, the social reintegration being compromised. There are to discuss the psychological and psychiatric implications, both for survivors and their families. The choice to attempt resuscitation or not may be difficult in this context. Better training in the field of cardiopulmonary resuscitation may help reducing ethical dilemmas that the medical team may face.*

Cuvinte cheie: *resuscitare cardio-pulmonară, etică, oprire cardiacă*

Rezumat: *Oprirea cardiacă este un eveniment nefericit ce încheie viaţa fiecărui om. Uneori este un eveniment previzibil, în cadrul evoluţiei unei boli cronice, alteori apare ca şi o complicaţie dramatică a unei suferinţe recent instalate. Încercarea de a resuscita victima unui stop cardiorespirator reprezintă un obiectiv zilnic pentru membrii sistemului medical de urgenţă, însă deciziile şi gesturile care iniţiază şi conduc o resuscitare pot fi subiectul unor teme de etică. În România nu există reglementări legate de deciziile ce pun capăt unei vieţi, iar în situaţiile de urgenţă personalul medical instituie toate măsurile de care dispune pentru a menţine viaţa pacientului. Aceste gesturi se pot dovedi a fi nu numai inutile, dar şi costisitoare. Personalul din sistemele medicale de urgenţă poate avea abilităţi clinice şi morale pentru a decide utilitatea iniţierii unei resuscitări. Însă factori precum presiunea familiei, lipsa de reglementări specifice, pot determina resuscitări inutile sau chiar „resuscitare de complezenţă". De multe ori există martori la evenimentele de oprire cardiacă din afara spitalelor, însă aceştia nu sunt instruiţi în resuscitare şi nu efectuează, până la sosirea echipajului medical de urgenţă, compresiile toracice necesare viabilităţii cerebrale. Acest lucru arată nevoia de educaţie în ţara noastră în domeniul resuscitării. În cazul pacienţilor care supravieţuiesc opririi cardiace, drama nu se opreşte odată cu reîntoarcerea circulaţiei spontane. Din cauza hipoxiei, apar leziuni cerebrale în diverse grade de severitate, condamnând pacientul la sechele neurologice sau chiar la moarte cerebrală. Majoritatea acestor pacienţi necesită îngrijire permanentă, reintegrarea socială fiind compromisă. Sunt de discutat implicaţiile psihologice şi psihiatrice atât în cazul supravieţuitorilor, cât şi a familiilor acestora. Alegerea între a resuscita şi a nu resuscita poate fi dificilă în acest context pentru echipa medicală. O mai bună instruire în domeniul resuscitării cardiopulmonare ar putea contribui la reducerea dilemelor de ordin etic cu care aceştia se pot confrunta.*

Cardiac arrest is an unfortunate event that ends the life of every human being. Sometimes, the event is expected, after a prolonged suffering in the evolution of chronic terminal illness, sometimes, it comes unexpectedly in the middle of an apparent healthy state, and it sometimes occurs as a dramatic complication of a recently installed suffering. Trying to revive the victim of cardiopulmonary arrest is an everyday objective for the emergency medical system physicians, but it concerned people since centuries ago, along with the first observations and attempts to restore breathing and circulation of people in clinical death.(1) Although the interest for CPR (cardiopulmonary resuscitation) is historical, and modern technology has brought

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many devices and tools to optimize medical gestures, resuscitation outcomes remain poor, whether the return of spontaneous circulation (ROSC) does not occur, or that it only appears briefly. In 2003, the largest registry which was reporting and analyzing in hospital cardiac arrests (IHCA) at that time, "The National Registry of Cardiopulmonary Resuscitation" of the American Heart Association, reported ROSC in 44% of cases, distance survival being of 17%.(2) These data refer to cases in hospitals with well-established protocols in case of cardiac arrest and with resuscitation teams specially trained and prepared for such cases.

Each intervention has high costs and post-resuscitation care in intensive care units is also expensive. The medical resources are limited and choosing not to attempt resuscitation can significantly reduce the costs for hospitalization.(3) Studies about the outcome of the resuscitation attempts have emerged in Europe as well, supported by initiatives, such as the national registries of cardiac arrest. Knowing that there is a chance to restore life to a person, but having high costs for society and low rates of success, and given the lack of firm regulations for the end of life decisions, how do we practice cardiopulmonary resuscitation (CPR) in Romania, according to ethical codes, professional dignity and personal safety?

There have been defined four key principles in the ethics of resuscitation, as they are noted in the resuscitation guidelines 2010 of the European Resuscitation Council: autonomy, non-maleficence, justice and beneficence. There are also mentioned principles like dignity and honesty.(4) Autonomy refers to the patient's right to decide over his/her own life; the patients can and should give their informed consent whether to accept or reject the therapeutic conduct or the resuscitation. This principle was defined in the Declaration of Human Rights in Helsinki in 1964, revised.(5) In the current medical practice special forms, dedicated to the informed consent, are used for admission, anaesthesia and surgical procedures. In emergency situations, however, especially when the medical condition is affecting the consciousness of the patients or their ability to give the informed consent, the doctor must provide all the necessary medical assistance until the documents attesting the patient's wishes are available, or until further medical information.(6) The third principle, the beneficence, refers to the doctor's choise to take medical decisions and to promote recommendations to the benefit of the patient.(7) Non-maleficence is the doctor's duty to prevent medical gestures that would jeopardize the patients' health status. Justice refers to the distribution of the fundamentally limited medical resources in society. These goals are not always met, and to respect one principle may lead into breaking another principle of medical ethics. For example, a doctor may recommend the best treatment in a given situation, but the patient could refuse the treatment or the procedure as the patient may not want to undergo the side effects or because the recommendations are just too expensive.

Resuscitation may sometimes be considered futile. CPR is futile if it can not prolong patient's life with an acceptable quality.(4) Emergency medical system personnel may have clinical skills and moral abilities to decide whether to initiate a CPR or not.(8) In 1977 January 1st, comes into effect the first law in the United States that allows competent, autonomous adults which are in the terminal stage of an incurable disease to instruct their doctor to stop or not to apply life support procedures proved futile.(9) Advance instructions have become a complex and highly debated topic all over the world.(10) In Romania, there is a legal vacuum regarding the "do not attempt resuscitation" (DNAR) decision and stopping the procedures that sustain life. Regarding the current legislation, leaving helpless a person in need is a crime. Thus, failure to provide necessary assistance or failure to notify the authority to grant such aid to a person whose life is in danger and lacks the ability to save himself, is punishable by imprisonment.(11)

The Romanian Criminal Code which will enter into force on 2014, February the 1st, tackles two new important matters: it recognizes the need for the rescuer's safety, so leaving without help a person in distress is not an offense if, by providing it, the rescuer endangers himself in any kind. The second matter refers to the obstruction of the interventions for salvation, and this may be punished by imprisonment.(12) At this time, there is no known case in Romania whose object is linked to "do not attempt resuscitation" orders. However, the law on the patients' rights defines the concept of "instructions in advance", so that the properly informed patient, aware of the consequences of his wishes, requests or not to initiate resuscitation in the event of cardiopulmonary arrest. Having such a written agreement in healthcare units dedicated to terminally ill patients can assure a dignified end for the patient and a psychological comfort for the medical staff, as the patient has understood and accepted his own illness and knows that the cardiac arrest in this case is a natural event in every human existence and not a professional failure.(13) It is noted, however, a marked reluctance of the patients and of their families to instruct DNAR or the refusal of other medical gestures in signed forms. This may be due to the lack of information and a certain type of psychological attitude, specific to this region. There are also cases of patients whose resuscitation is considered futile by the doctor and the family members request that medical staff do everything possible to save the patient. In this situation, medical arguments for DNAR, not being supported by the law, fall under the pressure of the family. As the current economic environment is increasingly difficult and seriously affecting the individual and society as a whole, we can see an increased pressure of families over the medical staff and even vehement expression in cases where the patient is the only income provider for his family, either from his salary or through social assistance. There are cases in which medical staff chooses to resuscitate a patient, despite medical reasons.(14) Legal vacuum, the violence of the patient's family, fear of being punished for some reason, can cause emergency medical team to initiate either a futile resuscitation or a resuscitation "of convenience" called "slow codes". This practice is recognized and debated in professional circles, some authors considering this choice justified in certain situations.(15) During informal discussions with members of emergency medical teams, they admitted that they have at least once performed a resuscitation of convenience; in the cardiac arrest cases in which they admitted this practice, no life support of any kind have been initiated for at least 45 minutes and the resuscitation of convenience consisted in poorly performed chest compressions and no drugs were administered. Obviously, these are anonymous statements without statistical significance, since for the time being, there is no study that addresses this issue in Romania.

It is admitted that early initiated basic life support manoeuvres such as chest compressions, with or without rescue breaths, may ensure a minimum cerebral and coronary flow so that the cardiac arrest victim may have increased chances of resuscitation and of a neurological status comparable to the one prior to the arrest. Informing people about the significance of a cardiac arrest, the recognition of such an event and especially what can cause cardiac arrest proves to be a necessity. Recent studies show that in Romania, more than 90% of out of hospital cardiac arrests (OHCA) occurred in the presence of a witness,

but only a few of them initiated life support manoeuvres before the arrival of the emergency medical team.(16)

A Danish initiative aiming to involve the community in providing basic life support showed significant increases in the bystanders' providing CPR correlated with increased survival after OHCA in that area.(17)

In patients who survive after a cardiac arrest, the return of spontaneous circulation does not mark a return to normality; the patient's condition is still critical due to ischemia-reperfusion injuries and pathologies associated with the post resuscitation care. Brain damage due to hypoxia may have varying degrees of severity, which generates various neurological sequelae.(18) Most of these patients require constant care (19), social reintegration being difficult or even compromised. Furthermore, the psychological and the psychiatric implications for both the survivors and their families should be considered. There are solutions for improving cerebral performance category as the use of therapeutic hypothermia (20) or percutaneous coronary intervention (21), but these procedures are expensive and only available in certain centres.

In the study conducted by Arrich et al. regarding the cerebral performance category in patients with OHCA, improvement have been noticed in the first 6 months after cardiac arrest in 12% of patients.(22) An issue worth mentioning is the Lazarus phenomenon; it is defined as "delayed return of spontaneous circulation (ROSC) after cessation of cardiopulmonary resuscitation (CPR)".(23) The name "Lazarus" refers, of course, to the biblical figure revived by the holy deity. The first case of this type has been described in the medical literature in 1982.(23)

In a letter to the editor (24) in the journal Resuscitation, Lapostolle and colleagues, draw attention to another phenomenon that raises important ethical issues: signs of life in dead patients. The letter refers to signs of life to patients in cardiac arrest without resumption of the spontaneous circulation, despite granting advanced life support for a prolonged period. The main ethical issue is determined by the termination of resuscitation, when life support by extracorporeal circulation is not possible. This is not included in the resuscitation guidelines in 2010, but future editions may address this.

In Romania, there have not been reported such cases yet. For the teams of the emergency medical system, the choice to attempt or not to attempt resuscitation may be difficult, when considering social factors regardless of the medical reasons. Better training in cardiopulmonary resuscitation in general population could help reducing ethical dilemmas that the medical teams may face.

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