INTRODUCTION

Diagnosing death represents an activity that carries a great deal of public responsibility for medical professionals and is perpetually exposed to the control of the public and media [1]. This activity is regulated by the corresponding Healthcare Protection Act (Official Gazette of the Republic of Serbia No. 107/2005, 02.12.2005). In practice yet another medical document – “death diagnosis form” – can be found, which pronounces that the person is dead and notes the time (date and hour) when death was declared, without stating the manner and cause of death [2]. Therefore, this document is not equivalent to a certificate of death, and therefore the deceased cannot be buried based on such a document.

Diagnosing the signs of death (uncertain, probable and certain) is done by a detailed physical examination of the whole body by inspection, palpation and auscultation [3]. It is most significant to detect all signs of previous and particularly recent injuries that can be suggestive of homicide, thus indicating the need for performing a forensic autopsy.

It is particularly necessary to point out that the death diagnosis form contains the following sentence: “Based on the performed detailed examination of the naked body […] I confirm lethal outcome” [2]. This means that the physician issuing the death diagnosis guarantees by his signature that he has personally performed a direct examination of the deceased as declared obligatory by the Healthcare Protection Act (item 1, article 210). Unfortunately, in present practice we have been faced with situations where the physician issues a death diagnosis for a person he had not examined at all or even for a person who had been already buried. Such physician’s conduct is impermissible and may lead to the possibility of professional and criminal justice sentencing.

Based on the examples from practice we want to indicate the need for exceptional caution when confirming and pronouncing death so as not to declare dead someone still alive.

CASE REPORTS

Case 1

Neighbors noticed that a person living alone had not been seen leaving the apartment for two days. They called the police because a foul smell started spreading from the locked apartment. Upon arrival the police officer called a physician, who noted that the entrance door was broken in, the apartment was in disarray, the room was dimly lit by a wall lamp only, it was exceptionally cold with feces spread all over the floor. Foul odor could be smelled. The person was in face-down position. Minimally disturbing the body, the physician’s finding stated that the person was a female aged about 80 years, unconscious, not breathing, with impalpable pulse over the carotid artery, mydriatic pupils unreactive to torch light, and with stiff neck and jaws. The extremities were cold and livid. The present neighbors were not helpful in obtaining heteroanamnestic data on previous medical conditions as the person was unsociable and did not associate with others.
After examination the physician passed the following diagnosis: sudden death of unknown cause (R 96.1 according to the International Classification of Diseases), and issued the death diagnosis form. After 45 minutes the physician was called again with an explanation by the present persons that the patient started giving signs of life. This time the physician detected that the apartment was cleaned, aired and with pulled up window shutters. On the repeated physical examination he disclosed that the patient was unconscious (Glasgow Coma Scale = score 3), unresponsive to voice and rough stimuli, of shallow and irregular breathing (respiration rate of 6–9 breaths per minute), without palpable pulse and of unmeasurable blood pressure. Due to collapsed veins, it was not possible to insert an IV line. An airway was inserted and the patient was ventilated with an artificial manual breathing unit (AMBU), with the flow rate of 151 breaths per minute. Under the diagnosis of coma of unknown cause the patient was transported to an on-shift hospital neurology department.

Case 2

A physician was called for a person who, as told by a witness, had not seem to be giving signs of life. On arrival to the site, the physician detected a male person aged about 75 years laying motionless on an unlit apartment terrace, with body stuck among some objects. Heteroamnestically, the data were obtained from a son that the person had been consuming large quantities of alcohol for years, and was thus hospitalized several times. On examination, the physician concluded that the person was unconscious, not breathing, without a central pulse, and of mydriatic pupils unreactive to light. His skin was livid, and the extremities were cold and stiff. The physician pronounced him dead. After 75 minutes the physician was called again from the same address because it appeared to the son that his father was still alive. On arrival to the site the physician detected that in the meantime the patient was put to his face-up position. Both patients were dead so that the examination was done superficially (without auscultation and without performing electrocardiogram as the most reliable method of confirming cardiac arrest). They detected that the patient was unconscious, not breathing, with impalpable pulse, and with mydriatic pupils [6]. New guidelines for good clinical practice accentuate that hypothermia alone leads to immeasurable blood pressure and decreased filling problems, irregular pulse, and that absent pulse is not a reliable sign of the absence of effective circulation [6]. In patients with severe hypothermia, the absence of all vital functions is not a sufficiently reliable indicator to pronounce death. In hypothermic patients, dilated pupils can be caused by numerous factors and must not be considered a sign of death [7]. All cases that show absence of vital signs, pulse absence or if there is any doubt regarding these factors, adequate measures of cardiopulmonary resuscitation (CPR) should be urgently performed, and must be sometimes applied over a longer period of time, i.e. practically until the appearance of probable or certain signs of death.

In the presented case, the physicians did not apply CPR measures. In some cases it is possible to achieve a full recuperation of vital functions after prolonged CPR, even without any consequences. It is obligatory to apply the traditional approach to the patient in hypothermia by transferring him to a warm, dry room and getting him into dry clothes under the motto that nobody is dead until they are warmed and dead.

The aforestated erroneous procedures during the declaration of death indicate the fact that it is most important for the physician to be obligatorily acquainted with the term of apparent death [8, 9]; it is characterized by deep unconsciousness and hardly noticeable blood-flow and breathing. Apparent death should be suspected if minimal vital signs can be noticed; if probable or certain signs of death have not appeared after the usual period of time; in sudden death of the adult or child; and in alcohol or psychoactive substances poisoning, hypothermia, stroke, uremia etc. Proof that these were the cases of apparent death was based on later (after death was diagnosed) witnesses’ observations of minimal signs of life in the patients, after which the physician was called in again.

What did the physician miss out? The first patient was transported under the diagnosis of coma of the unknown cause. By definition coma is a state of deep unconsciousness from which the patient cannot be awakened even by physical stimuli. It is well known that, depending on the localization of lesions that caused coma, pupils can be dilated and nonreactive to light. However, it depends
on etiological factors whether neck stiffness or cessation of breathing will also develop. New guidelines for good clinical practice also indicate that absent pulse is not a reliable sign of absent circulation [6]. It should be kept in mind that heart sound may be so weakened that it can be barely audible.

In the second case, as the precondition of the apparent death the patient was alcoholic, and had a stroke diagnosed during another examination. Having in mind the data of chronic alcoholism, it is probable that hypothermia developed under the influence of low environmental temperature and humidity. In practice, victims of freezing are often homeless intoxicated persons falling asleep in unsheltered places [10]. Accordingly, due to constriction of blood vessels, the patient's skin became bluish and extremities cold and stiff. Due to the paralytic influence of cold air the patient fell into a deep coma, with dilated pupils, and decreased and hardly audible breathing.

All this indicated the state of apparent death, which is “the transitional state of live organism in which basic vital signs are reduced to a minimum; it can last from 24 to 48 hours and can be misleading both for the laymen as well as for the physicians” [2]. Experience has shown that, as a rule, the examination of the deceased should not be performed out of healthcare institutions [11] if the time period elapsed from the moment of death is not shorter than three hours, since this is the period of time necessary for the development of signs based on which the physician can reliably confirm occurrence of death. This minimal time interval that should elapse from the moment of death until the examination of corpse is not distinctly stated in the Healthcare Protection Act.

When confirming and declaring death, exceptional caution of the physician is necessary so as not to declare dead someone still alive!

REFERENCES
1. Pravilnik o postupku izdavanja potvrde o smrti i obrascu potvrde o smrti. Službeni glasnik RS, br. 25/2011.