



# Energetic death: The unknown phase of thanatology

Adrián Ángel Inchauspe

Hainan Medical University. Haikou, Hainan, China

## ARTICLE INFO

### Article history:

Received 26 September 2018

Revision 26 October 2018

Accepted 15 November 2018

Available online 21 December 2018

### Keywords:

Thanatology

Energetic death

Chinese medicine

Cell death

Organ transplantation

## ABSTRACT

The large amount of classifications about the concept of death from a medical-legal perspective leads us to think that there are still many aspects to accurately define that precise moment in which the end of our earthly existence is considered as a final and unalterable fact. An answer to such a question may come from a retrospective analysis of those victims of impending-death situations that have been rescued after both basic and advanced cardiac pulmonary resuscitation failure and their consequent medical-legal death declaration. The aim of the following work is to introduce a new phase within forensic thanatology, supported by a complementary resuscitation maneuver based upon millennial traditional Chinese medicine principles together with a detailed analysis of current global agreements on organ transplantation and an avant-garde perspective on actual knowledge about cell death. Those terms will then allow us to achieve a holistic view of said concept, still loosely defined at present. Such an innovative diagnostic-therapeutic resource can in turn enable us to evaluate and face the irreversibility of such extreme situation, analyzing the statistical feasibility of its promising results.

## 1. Introduction

There is no doubt that the most critical and concrete situation in which life is risked is that caused by a group of pathologies that inexorably end in an impending death situation: that is to say, in a condition of imminent death. However, in spite of the large amount that has been stated about this issue, there is still no exact definition to determine the precise moment in which our earthly existence ceases, an irreversible fact.

The most important aspect to determinate is the exact moment in which (brain) death takes place. My experience in cardiopulmonary resuscitations over the last 30 years has led me to view this situation from different perspectives. In fact, the very first situation to be

considered would be, precisely, the precise moment death occurs. The majority of the cases treated with the complementary maneuver over the K-1 acupuncture point Yongquan form a cohort of very particular patients, who were rescued after the physicians had pronounced the patient's death and/or decided to definitely stop their vital support. Somehow, we could infer that said patients were pronounced "dead" before being rescued by the maneuver over the K-1 Yongquan[1].

This leads us to inexorably raise the following questions: When

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** reprints@medknow.com

©2018 Journal of Acute Disease Produced by Wolters Kluwer- Medknow

**How to cite this article:** Inchauspe AA. Energetic death: The unknown phase of thanatology. J Acute Dis 2018; 7(6): 225-233.

✉ Corresponding author: Prof. Dr. Adrián Ángel Inchauspe, Invited Foreign Professor, Hainan Medical University. Haikou, Hainan, China; 14 No. 4079 (B1884CUB) Berazategui-Argentina. Tel: (+54) 11 4256-1616 E-mail: adrian.inchauspe@yahoo.com.ar

is death reliably diagnosed in the human being? What does the accuracy of such diagnosis depend on? Are there several kinds of death? Can Chinese traditional medicine make any contribution to this knowledge? Is there an extended possibility of recovery after such terminal diagnosis so that the life of the patient can be “caught” before reaching a “point of no return”?

## 2. Forensic thanatology

Although there exists information that the first forensic treatise (or the oldest known) is the work of the Chinese physician called Song Ci “Collected Cases of Injustice Rectified” probably written during the Southern Song Dynasty[2], the term *thanatos* derives from the name given by the Greek mythology to the goddess of death[3]. Forensic thanatology, a term coined around 1901 by the Nobel Prize Elias Metchnikoff, is the branch of medicine devoted to the study of all those medical-legal matters related to death, its causes and the different ways of disposing of a corpse[4].

From a connotative point of view, death involves in itself, three basic concepts:

- The medical concept of death: It refers to the permanent and irreversible disappearance of all spontaneous signs of life in a given individual;
- The legal concept of death: It considers the absence of life in an individual with no cerebral activity, which means the end of an individual’s existence;
- The medical-legal concept of death: It involves the irreversible stoppage of the cardio-circulatory and respiratory functions as well as those of the central nervous system of the human being[3].

Nowadays, the irreversible condition of cardiac arrest as well as that of the definitive loss of electro-encephalic activity (some groups also consider the dynamic echocardiography and the loss of encephalic flow as detected by cerebral arteriogram) constitutes the evidence determining the inexorable loss of the vital functions.

Legally speaking, in order to declare the “encephalic death” of an individual, some parameters must be fulfilled, namely:

- Complete and permanent absence of conscience;
- Permanent absence of spontaneous breathing;
- Absence of neurological reflexes of the brain stem, including pupillary areflexia, reflexes in the presence of nociceptive stimuli and ocular movements in the presence of vestibular tests.

However, from a tissue-histological point of view, Avendaño explains in his work “Medical-Legal Concept of Death”: “... death is just a mere event”. “From this point of view, death is a prognosis, since the organism does not die simultaneously”[5].

The above-mentioned statement cannot be truer: at present, world legislation regarding the transplant of organs is based on such a concept. We could not deny said train of thought, since it has already helped millions of patients, prolonging their existence

and improving their quality of life and perhaps granting the only possibility of subsistence for certain patients.

However, in spite of the many implicit benefits of this practice, it has been necessary to enact a law in such a way as to almost compel the population to become donors (*e.g.*, in Argentina, at the moment of getting the national identity card), since there is no spontaneous determination to organ donation after death. Beyond special religious circumstances, there is still, in the collective unconscious, a certain degree of mistrust about the fact that a person can be “truly dead” at the moment of delivering their body for benefit of a neighbor.

Some fantasy literature, such as the work of Edgar Allan Poe, popularized stories of people who “revived” after their bodies had been buried. In fact, between 1870 and 1910, in London and in the USA, an industry devoted to make “safety coffins” developed, so as the “dead” could call for help through vents, bells or flags. Even today some cases, which can make us doubt whether to donate organs or not, are sporadically published[5].

It may be worth stating once more, that the purpose of this work is far from discouraging the donation of organs, as there is no more altruist act than that of “donating life”. On the contrary, its real aim is to establish a measure that adds security at the time of determining death; not only at an organic level but also at the energetic level. In fact, the evidence suggested contains in itself an alternative maneuver of resuscitation that could be applied in case the habitual measures of vital support fail, adding the quoted diagnosed possibility as a new opportunity to live.

## 3. Classification of different states of death

Surprisingly, mistakes are still being reported at the time of certifying death: the problem is that the definition of death is, as we have just seen, only supported by negative data or signs; that is to say, by the absence or abolition of the vital constants (namely, by absurdity). We agree with Avendaño that nobody has proclaimed yet a positive or decisive pathognomonic sign at the moment of death[5]. We will later see that many of the signs related to such absences that justify death could be present in those patients who have not departed yet. Needless to say, that the referred world legislation about operative transplant procedures and the consequent selection of “live donors” is based on such an issue.

It occurs as the consequence of ageing or complications due to any known disease, accidental or not.

As stated by a medical-forensic study, several phases of death can be differentiated. We shall try to arrange them according to a pre-established progression from the moment there is a suspicion to the accredited confirmation of death.

From ancient times various phases, physical as well as spiritual,

of death were admitted[6].

The “Tibetan Book of the Dead” or Bardo Thodol (“The Liberation through Hearing during the Intermediate State”), is a classical Tibetan piece that analyzes the psychological penetrations at the time of death. According to said text, individuals stay in the bardo, an “intermediate” state that is formed by various phases, which lasts 49 days after death[7].

In Ancient Greece, Plato illustrates us at the end of his Republic[8] with the eschatological legend of “The Myth of Er”, in which he tells the story of a soldier from Pamphylia called Er who died in battle and is revived by the gods after twelve days on his funeral-pyre in order to tell the living the destiny of their souls after death[9].

We will now analyze the different stages recognized by contemporary thanatology[4].

### 3.1. 1st phase: Apparent death

It happens when the vital signs are gone but only apparently. There is an important attenuation of vital signs: heart beating as well as arterial pressure, breathing and reflexes of the nervous system are almost imperceptible; this occurs to such an extent that, those elements seem to be abolished or gone. The person then “seems to be dead”.

The following are signs that may lead to this misleading diagnosis of death:

- coma;
- loss of conscience;
- insensitivity;
- loss of reflexes;
- apparent absence of heart beating (environmental noise-inexperienced explorer);
- apparent absence of breathing movements;
- imperceptible pulse;
- sphincter relaxation.

Strictly speaking, in fact, there exists no death situation but this is often confused because the vital signs are present but reduced to the minimum extent, all of which leads to misunderstand and over-diagnose the condition of death (examples: syncope, intoxication, neurosis, catatonia, immersion in iced water, drugs, etc)[4].

From a medical-legal point of view, the so called undetermined deaths can be included in this group. They are those in which a suspicion of criminal act may be inferred. The following are some examples:

- Presumed death: Legally, it refers to the case of disappearance for a prolonged time[3,10];
- Simulated death: It is not real but caused by different media which intentionally simulate the reduction of vital signs to such an extent that these are mistaken with a true death. Examples of this kind are: hysteria, akinesia or intoxication by specific chemicals,

as is the case in the famous play “Romeo and Juliet” by William Shakespeare[11].

### 3.2. 2nd phase: Relative death

In this phase, the cardio-circulatory, respiratory and neurological functions are suspended or abolished, and the vital signs have effectively disappeared. From a medical-legal point of view, the situation is interpreted as prolonging the agony, since the individual can still be revived through the implementation of extraordinary measures of resuscitation, thus being able to recover the vitality of the victim (reviviscence[4], with the consequent recovery, in some cases. Typical examples of this phase are sudden death and cardiopulmonary arrest (either traumatic or non-traumatic)[12].

Let us quote Avendaño again regarding this particular cause of death: “...relative death occurs when there is a complete and prolonged cardiac arrest, and when it is possible to make it function again by means of adequate maneuvers”; as it is the case of physicist Lev Davidovich Landáú, who suffered three cardiac arrests and is still alive, after being awarded with the Nobel Prize”[5].

### 3.3. 3rd phase: Intermediate death

During this stage the hemodynamic and metabolic activities start diminishing and disappearing progressively, alerting us that there already exists an irreversible damage in certain organs and tissues. In this phase, the classical maneuvers or standards of resuscitation will not succeed; that is to say, the vitality of the organism will not be recovered as a bio-psycho-social entity[4]. A typical example of this phase is cerebral anoxia (there appears neurological reaction of decerebration).

The cases included in this phase form part of the so called functional deaths.

--- Clinical or functional death: It is the case in which death has already been diagnosed due to the absence of vital signs although, as in the case of the relative death, many cases can be reversed.

--- Brain death, cortical brain death or mesencephalic death: It involves those cases of deep coma whose main feature is the lack of response to external stimuli, with absence of voluntary control (areflexia - muscular atony), no brain activity, no spontaneous breathing is diagnosed by means of a flat line EEG (in isoelectric) and negative cerebral angiography.

In these cases, it is interpreted that conscience has been irreversibly lost (“vegetative life”). However, it is necessary to clarify that brain damage does not always imply brain death; in fact, there have been cases of patients with said diagnosis who have fully recovered their cognitive functions[5].

### 3.4. 4th phase: Absolute or total death

It implies total and absolute disappearance of all biological activity of the organism. Every vital function irreversibly ceases to function once an attempt to rescue the patient has been carried out for 10 min. The “Do Not Resuscitate Order” is based on the previous concept. Said Order is in force in some European countries (such as Spain), in view of the potential neurologic damage that occurs as from that period of time and the consequent eventual cost for the State[4].

On the other hand, total death can be declared 36 h after death; that is to say, when there is no more life at anatomical as well as at histological level.

Types of absolute or real death refer to all those conditions in which the absence of vital constants is verified, either by the semiology of the physical check-up or by the complementary studies used for diagnosis. This condition occurs according to the following parameters: absence of signs of life and presence of signs of death.

Inhibition death occurs when there is a chaotic appearance of extreme environmental or emotional stimuli (“*coup de chaleur*”), and a series of reactions is triggered. Said series block, restrict, reduce or suspend the normal psycho-physiological regulation of homeostasis, cancelling the habitual integration between apparatuses and systems, leading to multi-organic failure and the subsequent actual death of the tissue. For example: the acute suprarenal necrosis that used to happen with “the suicidal passing of grenades” described by Gregorio Marañón during the Spanish Civil War[4].

Real death, tissue or somatic death presupposes the definite presence of all the physical signs of death.

#### 4. Death classification considering time variable

Recent death: It comprises all deaths previous to cadaveric phenomena of putrefaction.

Rapid death: It refers to a death that occurs immediately or in a short period of time. This concept is sometimes mistaken with sudden death, as in most cases it is accidental[4].

Unexpected or unforeseen death: It happens in an apparent healthy individual, with no previous history or known cause through which it could be explained[13].

Sudden death: By definition, under this situation death happens unexpectedly (that is to say, there is neither a suspicious sign nor an external violent cause) in a subject who is apparently in a good state of health. As can be seen, this kind of death is formed by the previous types, which are possibly confused because of the adjective “sudden” that, in turn, involves both concepts: “quickness” and “without warning”[13].

Sudden infant death (also called crib death or nocturnal death): It may happen in newborns or infants up to four months of life.

Premature babies and those having low birth weight are also included in this category. Post-mortem examination does not reveal any apparent reason that may justify death.

Expected death: It is the fatal sudden end of an individual’s life who has been suffering from some acute or chronic illness with a somber prognosis. Somehow, the notion seems to refer to those subjects affected by an irreversible condition (that is to say, those who inevitably are expected to die due to an already known cause), despite an unexpected rapid progression.

Transitory or momentary death: This sub-group forms part of the causes of real death, though it may be reverted if resuscitation maneuvers are applied even after 3 or 4 min after death has occurred. It has neither relation with that of the theological resurrection nor with any other similar “miraculous” phenomena. It seems to refer to a stage immediately previous to relative death. For example: cases of electrocution-asphyxia -submersion[4,5].

Slow or agonizing death: It is the one that occurs in a gradual way, progressively exhausting the individual’s vitality. Example: terminal illnesses.

Distant death: It is known in this way as it occurs at the beginning of the abiotic and/or transformative cadaveric phenomena[4]. The so called “cadaveric phenomena” are principally of two types:

1) Abiotic manifestations: They appear due to the extinction of the vital functions. These include algor mortis (cadaveric cooling), that means body temperature gradually decreases (one grade per hour) from the moment of death. It levels with the temperature of the environment within 24 h;

2) Transformative manifestations (consecutive to the previous ones. They are the effects of bacterial flora and of environment over inert tissues). The following are among them:

--- Livor mortis (postmortem lividity): a settling of the blood by action of gravity in the capillary venous networks which continue moving until 24 h after death; after that, they locate in a fixed place;

--- Rigor mortis (cadaveric rigidity): It is the effect of the coagulation of myosin over the flat and striated muscular system of the corpse. It begins between 3 to 5 h after death and finishes 24 h later;

--- Rotting: abiotic destructive sign that appears about 36 h after death, when organic matter begins to decompose causing putrid gases by disintegration of proteins[11].

#### 5. Development of resuscitation maneuver over Shaoyin energetic level

##### 5.1. The Shaoyin energetic level

The Shaoyin, an axe composed by the heart and the kidneys and a polarized pair of the elements water and fire, commands the vital

functions, although the brain's energy may have been impaired.

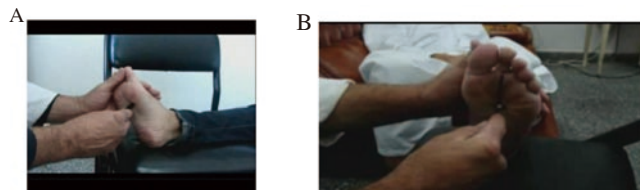
In chapter 9 of the Chinese medical canon “Miraculous Pivot” of “Yellow Emperor’s Inner Canon” it can be read: “*Extra meridians as Chong meridians and Ren meridians are connected to the Shaoyin channel*”; so through the Chong meridians, the “mother of the twelve meridians”, one is able to understand in what way kidney influences over the other body channels”[14].

In some serious accidents, in particular, motorcyclists wearing no helmet who suffer skull base fracture, cerebral activity disappears although the body continues to be alive thanks to the energetic axe of Chinese medicine mentioned above. In those cases, up to the 1960’s, a fail in both breathing and pulse perception were enough to allow doctors to pronounce a clinical death.

With the development of the organ-transplantation therapy, death was no more considered merely as the absence of vital signs, but a non-reactive EEG. Such situation, together with brain activity suspension, presents us a key Yin /Yang example, letting us to define a legally dead patient, so as to provide a “living donor”[14].

In the Shaoyin channel resides the last quantum of energy before life abandons us. Because of its connection with Earth (the most powerful Yin source available) K-1 Yongquan, as “root” point of the Shaoyin, enables the terrestrial Yin energy to rush up towards its cranial Yang pole, thus enabling the possibility of rescuing us with a very simple maneuver by only activating a specific point placed in one of the darkest and most retired places of the body: the sole of our foot[14].

It is convenient to perform the maneuver with the assistance of both hands over the same K-1 alternatively, as a considerable amount of pressure over the sole is required (Figure 1). In such cases, one thumb compresses over the established point and the other reinforces pressure over its distal joint. A strong thumb can apply a force of 10-15 kg. A pen or the end of a toothbrush can achieve more pressure over a smaller area with less effort. The maneuver increases the heart rate, as was confirmed in normal volunteers[14,15]. The EEG is not often monitored in patients out of the intensive care unit; however, in my experience, vital signs and consciousness were recovered almost simultaneously. The average K-1 stimulation time was 3.7 min and the most persistent symptom after the maneuver was only blurred vision[1,14].



**Figure 1.** Yong quan rescue maneuver.

A: side view; B: frontal view.

The term “Lazarus phenomenon” names an unexpected cardio-neurological recovery in apparently dead patients, in whom a

particular type of planned maneuver reversed impending death[15].

## 5.2. Tales about randomness criteria

To apply the randomness principle requires an ever increasing sample, following a quantitative interest, in order to escape uncertainty, thus reducing variability, making an effort to prove if any association visible through observation is a product of fate or not[16].

Such medical study necessarily implies determining an association between such two variables under research: in this case, applying the K-1 complementary resuscitation maneuver or not. Any statistical treatment contemplates the possibility of a standard error (SE). That is why, the wider the sample, the more precise it becomes and consequently, the possibility of results being random be greatly reduced[17].

Because it constitutes a unique variable, the control group can be made up of all those persons deceased previously to the protocol inclusion of the maneuver; that would gather the group of victims and their survival rates previous to the implementation of this therapeutic resource, eliminating the impairment found in random contingency, which in these cases would probably result in a fatal loss mentioned in the sections above[16].

To that end, we proposed the cohort retrospective study[18] in order to solve this problem. In such scenario, statistical analysis assisted our selection of the correct option by observing the breach between both treatments: *i.e.*, differences between control group (those who died previously and without the Yongquan maneuver treatment) and those who received the benefit of the maneuver. To that end we compared the group who were assisted by cardiopulmonary resuscitation (CPR) maneuvers without the use of a defibrillator (method “A”) and those assisted by the Yongquan resuscitation (method “B”). This comparison was carried out by using percentages of representative samples, rendering the values shown below, some of them published in Health in 2015[16].

Initially, we matched the manual CPR (6.40%) against Yongquan resuscitation maneuver (84.21%). Again, the result verifies that *P* value of 0.778, a figure higher than 0.098, which further debunks Ho hypothesis and once more verifies the alternative hypothesis (Ha)[16].

Afterwards, we compared the chest defibrillation (30%) against Yongquan praxis (84%). The same process of multiplication by SE:  $SE \times 1.96 = 0.0148$  was applied. Consequently, as *P* value of 0.542 is higher than 0.0148, it can be deduced that the difference in *P* once more becomes significant[16].

Furthermore, we also compared the use of CPR + defibrillation (48.00%) against the complementary Yongquan resuscitation maneuver (84.84% -2016), which, multiplied by SE:  $SE (0.0076) \times 1.96 = 0.0148$ . Because this result is also higher than SE multiplied by 1.96, it provides a value of 0.0148[19].

The difference here is also confirmed to be statistically significant; demonstrating once more the comparative value of the Yongquan method[18,20]. The aforementioned implies that such association did not rely merely on fate. We are, then, theoretically qualified to reject  $H_0$  hypothesis and accept  $H_a$ , definitively proposing the K-1 Yongquan resuscitation as a “quality guaranteed” method[17].

Even though today there are updated statistics in which manual CPR reached 17% survival rate (see, *e.g.*, [www.ymca.org.ar](http://www.ymca.org.ar)) actual survival rates would be noticeably lower. According to what Dr. Custodio Calvo, member of the Spanish Cardiopulmonary Resuscitation Association, has mentioned, such estimated indices of out-of hospital survival would not go further than 5%[21]. Other studies later claim a rise up in extrahospital survival rate to 10%[22] which, as they estimated, may result in an increased value if population had more knowledge on CPR technique and would make use of it.

Regarding the survival percentages due to the application of cardio version, recent studies presented by Dr. Emilio Marín-Huerta show that premature defibrillation increased this scale from 24% to 30% in cases of cardiac arrest[23].

As a matter of fact, statistics referring to extrahospital resuscitations seem to have stuck at a 6.4%, a figure which coincides with prior evaluations of the previous statistical analysis presented in other works[17].

It should be mentioned that, if cumulative rates of positive responses to the maneuver be considered (verified by pulse recovery and ECG record), the rate reached an 85.72%; *i.e.*, over 89 cases, 12 patients could manifest objective responses to K-1 stimulation.

### 5.3. Progression of presented statistics

Consequently, all the above data has made clear that there actually exists a difference if one takes into account as control the group of “deceased patients” instead of considering among them “patients that may be deceased” (Table 1). Such apparently simple consideration, thanks to the cohort retrospective study model, manages to efface the contingency of a possible “fatal damage”

as proposed by the randomness principle upon a prospective non-intervention group.

Except for very few situations, only 8 cases, with prior application of the “rescue box” (with 100% recovery), the rest of the victims of cardiac arrest were treated, as already stated, after failure of the basic and advanced CPR[14,15].

## 6. Discussion

Since ancient times, in China there existed maneuvers aimed at recovering patients in terminal stages. Some of the treatments derived from amazing “master recipes” such as the one revealed by the current personal physician to Pope Francis, Prof. Liu Ming. It was a “magic mushroom” called Dui Kou Jun (literally, “that which comes out of the mouth”) that grew in the inner lid of coffins, precisely at the level of the mouth of the deceased (Figure 2). According to Eastern Medicine, said mushroom grew in the place of the coffin that received the “last breath” of the dead person. As it is gifted with a predominantly Yin nature, it was able to nurture extremely weak or agonic people. It was cooked in “old” hen broth (older than 9 years; that is to say, with a great Yin potential) and it was capable of contributing to recovery in extraordinary cases. Today, this kind of mushroom has almost disappeared because dead bodies in China and Japan are cremated due to lack of space in cemeteries.



Figure 2. Dui Kou Jun fungus.

This comment, apparently anecdotal, is useful to determine that

Table 1

Resuscitation statistical sequence referred to Yongquan maneuver application.

Source	Date	Total case (n)	Death (9)	Survival rate (%)	Ref
50th Argentina Acupuncture Society Congress	November 2005	19	5	73.68	[24]
Lazarus effect video	November 2009	27	7	74.07	
Resuscitation Journal	January 2010	30	8	73.33	[15]
8th IDDST Congress	October 2010	39	8	79.49	[25]
In Tech's Publication	2011	44	9	79.55	[14]
9th International Brain Injury Congress	2012	52	9	82.69	[22]
World Journal of Critical Care Medicine	2013	58	9	84.48	[17]
World Journal of Critical Care Medicine	2016	84	12	85.71	[20]
Dublin INAIT-2019	2018	89	14	84.27	

somehow in the East, since ancient times, the existence of an “energetic end” was considered within the process of people’s deaths, beyond the moment of pronouncing clinical death[15].

The Chinese also provided “cardiac massages” in ancient times. By massaging acupuncture points from the back to the clavicle, they tried to recover cardiac activity. However, I have found out that the main revival point in acupuncture was represented by that place through which the earthly Yin enters our energetic system. This place has been determined as the “root” point or “ignition” point of the Shaoyin energetic circuit, set by K-1 Yongquan publications[14-17,20,22,26].

Thanks to its application, many patients have recovered their vital signs and their consciousness after their clinical death had been pronounced, which could be relative and/or functional, before failure of the basic and advanced CPR, reaching their reviviscence as has been consistently demonstrated in several publications[14-17, 20,22,26].

The scientific methodology that supports it, both in principles of traditional Chinese medicine as in its inclusion in the Utstein Style protocol comparative analysis, evidences the efficiency of the maneuver, that derives mainly from the sustained increase in survival rates presented in the successive statistics published since its application. The Yongquan praxis may adequately integrate as supplementary resuscitation maneuver to the current International Liaison Committee on Resuscitation’s protocol of basic/advanced resuscitation enforced worldwide. This inclusion would in no way infringe any of the gestures making up its “action chain”. Its integration into the international International Liaison Committee on Resuscitation protocol of CPR was published not long ago as a front cover in the *World Journal of Critical Care Medicine*[17].

Likewise, neurological studies have confirmed the usefulness of K-1 praxis in cases of coma[27] or cerebral vascular accident + cardiac arrest since, according to the acupuncture treatises, this point also rules the “sea of the medulla” (a direct reference to the encephalon in Chinese medicine). For that purpose, during the International Brain Injury Congress, 2012 Edinburgh, a comparison was presented between that maneuver and the skin-plantar reflex of Joseph Babinski. The “scratching” of Babinski, when correctly made, demands going through and stimulating the Yong quan point in order to determine the indemnity of the cortex-spinal axe due to this key maneuver of the neurological semiology[22].

Additionally, the magazine “Circulation” has proposed, since 1999, the use of the “scrub planting” (“rubbing plantar pressure”) as initial maneuver for primary apnea in newborns[28].

Nowadays, the WHO estimates that cardiovascular causes represent approximately 23% of all the deceased (only due to ischemic cardiopathy: 8 700 000 in 2017). If, to that we add the approximately 7% of the cerebrovascular cases (6 700 000 in 2017), both make up a total of over 30% of all the global causes of death.

This double therapeutics so evident in the case of stroke, in turn, cause or consequence of a cardiac arrest, is worth considering the maneuver over Yongquan as a valid alternative in cases of brain damage as well as stoppage of the cardiac function[29].

Yongquan “reopens this circuit”, acting as an extraordinary “Qi battery” and resetting the interaction between the Yin Terrestrial Qi and its compensation through melting with the Heavenly energy in the Upper Jiao, something essential to understand how the Yang Celestial Qi provides continuous motility to those thoracic organs whose function cannot be interrupted in order to maintain our life (as is the case of the heart and the lungs) while it also “opens the sensorial orifices” of the encephalon[14,30]. Hence, this approach of immense diagnostic-therapeutic value could well be used as a last resort before the presumption of an irreversible vital organic damage.

One of the most serious works on this issue in my country was written by MD Carlos Gherardi. It is called “death in an ICU”[31], in which 2 640 patients were admitted in order to classify them according to the treatment of vital support they were to receive, in the following way:

- a) Complete treatment;
- b) Complete treatment with order of no resuscitation;
- c) Removal of the vital support;
- d) Brain death.

The result of this prospective trial was that, under said conditions, there was a limited therapeutics of vital support of 45.6% ( $n=250$ ) and a therapeutic abstention + order of no resuscitation in 32.6% of the patients. This bioethical behavior widely prevailed over the removal of vital support, only with 8.2% strongly reduced in comparison with statistics of other developed countries, which have better access to state of the art technology and also a moral perception of non intervention under a critical and irreversible condition[31]. This systematization enabled critical patients, who would have been quite impossible to be saved otherwise, to be able to survive.

However, the technological advance that nowadays holds the vital support has brought about the appearance of new complications, especially in those who cannot recover due to vegetative state or multiple organic dysfunction that led them to such a condition[31]. That is why, as regards the above-mentioned categories, there exists common agreement as to the criterion used in the application of the complementary maneuver of resuscitation over the Yongquan point, precisely over the first two variables, a) and b). The others imply a consensus as to the predetermined decision of non application procedures of vital support due to the known irreversibility of the clinical conditions and the inefficacy of the K-1 Yongquan in patients medicated at ICU for prolonged periods of time[15,31].

Regarding the possibility raised in patients classified under e), there is usually a kind of family agreement as to limiting the operability of the vital support because they are legally deceased,

despite knowing that this action would ease the arrival of death<sup>[31]</sup>. However, we shall remember, for the other cases, what article 32 of the “F” Appendix, section “C” of the Declaration of Helsinki of the World Medical Association<sup>[32]</sup> reads, emphatically allowing the possibility of using new therapeutic procedures in cases of life risk of the patient.

### Conflict of interest statement

The author reports no conflict of interest.

### References

- [1] Inchauspe AA. My experience in cardiovascular resuscitation through K-1 Yongquan. Seville: VII Congress de FILASMA-XVII Curso Internacional de Acupuntura, Farmacopea y Medicina Tradicional China, IV Simposium SAME; 2010.
- [2] Hoang T. Introduction - Chap 3: About Chinese medical science. In: *Huangdi Neijing Suwen*. Ed. 1st ed. Buenos Aires: Continente; 2009, p. 32.
- [3] Criminology and criminality. [Online]. Available from: <http://criminologiaycriminalisticamex.blogspot.com.ar/2016/02/tipos-de-muertes.html> [Accessed on September 2018].
- [4] Legal medicine. Medical jurisprudence. [Online]. Available from: <https://medicinalegalaldia.blogspot.com.ar/2008/01/tanatologa.html> [Accessed on September 2018].
- [5] Avendaño J. Medico-legal concept of death. *Rev Neuropsiquiatr* 1975; **38**(1): 50-61.
- [6] Rimpoché S. The Bardo of becoming. In: Jorge Luis M, translator. *The Tibetan book of living and dying*. Harper-Collins Publishers, Inc; 2010, p. 359-372.
- [7] Pa KG, Evans-Wentz WY, Lopez Jr DS. *The Tibetan book of the dead: or the after-death experiences on the bardo plane, according to Lama Kazi Dawa-Samdup's English rendering*. England: Oxford University Press; 2000.
- [8] Plato. *The Republic*. Bloom A. Translator. 2nd ed. USA: Basic Books (a Harper Collins Publishers Division); 1991, p. 434-436.
- [9] Wikipedia. Myth of Er. [Online]. Available from: [https://en.wikipedia.org/wiki/Myth\\_of\\_Er](https://en.wikipedia.org/wiki/Myth_of_Er). [Accessed on September 2018].
- [10] Murillo Martínez S. Legal medicine. 17th ed. Spain: Ed. Méndez; 2014, p. 343-344.
- [11] Types of death-Forensic medicine. [Online]. Available from: <https://millerpumarios.blogspot.com.ar/2013/04/tipos-de-muerte-medicina-forense.html> [Accessed on September 2018].
- [12] [Online]. Available from: <https://www.google.com.ar/search?q=muerte+relativa+imágenes>
- [13] Inchauspe AA. Sudden, predictable and preventable death in pharmacological cardio safety. Dubai, UAE: 5th International Conference on Drug Discovery and Therapy; 2013.
- [14] Inchauspe AA. Traditional Chinese medical criteria about the use of Yongquan as a life support maneuver. In: Kuang H, editor. *Recent advances in theories and practice of Chinese medicine*. Rijeka: InTech; 2012, p. 362-366. DOI: <http://dx.doi.org/10.5772/29138>
- [15] Inchauspe AA. Traditional Chinese medicine K-1 Yongquan and resuscitation: Another kind of Lazarus phenomenon. *Resuscitation* 2010; **81**(4): 505-506. DOI: <https://doi.org/10.1016/j.resuscitation.2009.12.009>
- [16] Inchauspe AA. Resuscitation on the K-1 Yongquan: Ethical and methodological aspects of its pilot study. *Health* 2015; **7**(7): 809-818. DOI: <http://dx.doi.org/10.4236/health.2015.77095>
- [17] Inchauspe AA. Drawing the Yongquan protocol into the different stages of the cardiopulmonary resuscitation sequence. *World J Crit Care Med* 2013; **2**(3): 17-20.
- [18] Kopitowski, K. Commission of research. Training program for the Ethics and Research Committees of Buenos Aires Province. Buenos Aires: Ethics and Research Committees of Buenos Aires Province; 2013.
- [19] Mainella A, Domancich N. Official course in ethics and health research. Province of Buenos Aires, Argentina; 2013.
- [20] Inchauspe AA. Can PC-9 Zhongchong replace K-1 Yong quan for the acupunctural resuscitation of a bilateral double-amputee? Stating the “Random criterion problem” in its statistical analysis”. *World J Crit Care Med* 2016; **5**(2): 143-149.
- [21] Calvo C. The survival rate after applying basic CPR does not exceed 5 percent, according to recent studies. [Online]. Available from: <http://elmedicointeractivo.com/tasa-supervivencia-aplicacion-rcp-basica-no-supera-5-ciento-desprende-estudios-recientes-20110824154931094014/>. [Accessed on September 2018].
- [22] Inchauspe AA. Traditional Chinese and brain protection: Can its principles be consistent with western science? Edinburgh: 9th International Brain Injury Association Congress; 2012, p. 21-25.
- [23] Marín-Huerta E, Peinado R, Asso A, Loma Á, Villacastín JP, Muñoz J, et al. Sudden cardiac death outside of hospital and early defibrillation. *Spanish J Cardiol* 2000; **53**(6): 851-865. [Online]. Available from: <http://www.revespcardiol.org/es/muerte-subita-cardiaca-extrahospitalaria-desfibrilacion/articulo/10317/> [Accessed on September 2018].
- [24] Inchauspe AA. Phenylalanine injection over K-1 Yong quan: A theoretical way to upgrade survival rates in CPR. Buenos Aires, Argentina: 50th Argentinian Acupuncture Society Congress; November 5-7, 2005.
- [25] Inchauspe AA. Lazarus effect. Beijing, China: 8th IDDST Congress. Beijing International Convention Center; October 23-26th, 2010.
- [26] Inchauspe AA. New advances in research on reconciliation vessel for emergency treatments. *J Acute Dis* 2016; **5**(4): 271-280. DOI: <http://dx.doi.org/10.1016/j.joad.2016.06.004>
- [27] Zheng L. Acupuncture treatment for persistent vegetative state after operation of subdural hematoma. *Zhongguo Zhen Jui* 2005; **25**(2): 82-



84.

- [28]Berg MD, Schexnayder SM, Chameides L, Terry M, Donoghue A, Hickey RW, et al. Part 13: Pediatric basic life support. 2010 American Heart Association Guidelines for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation* 2010; **122**(18): 122: S862-S875. PMID: 20956229. DOI: 10.1161/CIRCULATIONAHA.110.971085.
- [29]Inchauspe AA. Torsadogenic index: a vanguard risk measure into the risk statement strategy. John B. Hynes Veterans Memorial Convention Center, Boston, USA: Drug Discovery & Therapy World Congress; 2013. [Online] Available from: [http://www.giievent.kr/eur279588-2014/Abstract-Book-DDTWC-\(2013\).pdf](http://www.giievent.kr/eur279588-2014/Abstract-Book-DDTWC-(2013).pdf)
- [30]Inchauspe AA. “Between heaven and earth” scientific basis of the action of Shao Yin: Lightning’s physical-mathematical analysis. *Pharmacol Pharm* 2014; **5**: 175-180. DOI: <http://dx.doi.org/10.4236/pp.2014.52024>
- [31]Gherardi C, Chaves M, Capdevila A, Tavella M, Sarquis S, Irrazabal C. Death in an intensive care unit. Influence of life support withholding and withdrawal. *Medicina (B Aires)* 2006; **66**(3): 237-241.
- [32]Carlson RV, Boyd K.M, Webb DJ. The revision of the Declaration of Helsinki: Past, present and future. *BritPharmacol Soc* 2004; **57**(6): [Online] Available from: <https://bpspubs.onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2125.2004.02103.x>