### ◆现代医学与法律

# 死亡与法律

# ——关于脑死亡的立法思考

#### 罗刚 石俊华

摘 要:随着现代生物医学科学技术的发展,死亡标准日益引起广泛关注,"脑死亡"概念及其诊断标准的提出,是对死亡标准的重新认识,具有重要意义。目前世界上已有多个国家立法通过了脑死亡标准;我国应该借鉴外国和我国香港、台湾地区的脑死亡立法经验,通过立法来确认脑死亡,从法律角度顺应形势,引导民众统一认识。

关键词:脑死亡;死亡标准;立法思考

### 一、死亡标准的法学探求

生老病死是人生之必然。作为通常意义上的"死亡"(Death),即"生物学死亡"(Biology Death),是指人本质特征的消失,即机体生命活动和新陈代谢的终止。但是,随着现代生物医学技术的发展、特别是人工生殖和器官移植技术的发展,生的方式和死的标准,也日益引起社会、特别是医学界和法律界的广泛关注。当代医学与法学所关心的已不仅仅是"死亡"的概念,而是何时是生命的终止时刻。传统的"死亡"观念受到日益严重的挑战,先进的高效复活技术和人工呼吸机可以使心跳、呼吸停止数小时乃至十余小时的病人重新苏醒,再加上人工营养维持,能使许多病人"起死回生",这些都促使人们开始重新思考"生"与"死"的界限。

法律急需为"死亡"去定义,因而急需建立和承认某一"死亡标准"(Death Standard),因为,死亡必须由法律来判定,以对医学临床提供法律指南,由此再去对含有死亡的事件进行裁决,以完成法律的任务。然而,法律的任务不在于如何给"死亡"下一个完美无缺的定义,而在于如何从死亡过程中定一个终点——个符合科学与伦理的终点,一个法律意义上的可以决定权利义务关系变更的终点。因此,死亡时间的判断标准才是法律所需要的。

### 二、脑死亡的法律问题

#### (一)"脑死亡"的概念与死亡标准

"脑死亡"(Brain Death)是指当心脏还继续跳动, 大脑的功能由于原发于脑组织严重外伤或脑的原发 性疾病而全部丧失,发生不可逆的改变,最终导致人 体生命的终结。脑死亡如同心跳和呼吸停止一样,是 人的生命现象的终止,是个体死亡的一种类型。

人的生命活动的表现形式很多, 其中呼吸和心 跳是最容易观察和测定的两种方式。因此、自古以 来,人们都把心跳和呼吸停止作为死亡的确切无疑 的象征,即传统的心肺死亡标准。中国的《黄帝内经》 称:"脉短,气绝死"。在西方,1951年世界著名的《布 莱克法律词典》将"死亡"定义为:"血液循环完全停 止,呼吸、脉搏停止。"医学临床上也一直是以心跳停 止、呼吸和血压消失以及体温下降作为宣告死亡的 依据。这一传统的"死亡"观念,在人类历史上沿袭了 数千年,被世界各国医学、哲学、宗教、伦理、法律及 社会大众所接受和认可。然而,自20世纪50年代以 来,由于现代医学的进展,这个人类有史以来最稳定 的观念受到冲击和挑战。现代医学研究表明,死亡是 分层次进行的复杂过程,心肺功能丧失并不代表大 脑、肾脏和人体其他主要器官功能的停止,心跳和呼 吸的停止作为过程的一个层次, 并不预示人作为一 个整体死亡的必然发生;而且,心肺功能丧失具有医 学可逆性,在心脏起搏器、人工呼吸机等先进医疗设 备的帮助下,可以进行长时间的人工维持;特别是心 脏移植技术的临床应用,表明心脏是可以替换的,它 与生命亦非同一,因而不是生命的象征。如果人体的 某个部分注定能够主宰生命的特异素质,那么这个 器官只有大脑。即使是迄今为止的最高医学成就,仍 然不能就脑功能丧失的可逆性作出有说服力的预 期。这样,死亡判定的医学规则——"脑死亡"概念及 其标准——也就应运而生。

#### (二)脑死亡的诊断标准

1."脑死亡"的定义。

各国有关脑死亡的法律,一般都将"脑死亡"定义为全脑死亡(The Whole Brain Death),即大脑、小脑

作者简介:罗刚,泸州医学院副教授,主要研究方向为医药卫生法学、诉讼法学。石俊华,泸州医学院教授,主要研究方向为 医药卫生法学。 和脑干不可逆的丧失功能。那么,脑死亡如何诊断和鉴别? 其鉴定标准关系到医疗行为的适当实施和法院审判工作的正确开展。

#### 2. 脑死亡的诊断标准。

对脑死亡的最早研究开始于 1959 年。1968 年,在世界第 22 届医学大会上,美国哈佛大学医学院死亡定义审查特别委员会提出了比较完善的脑死亡诊断标准,简称"哈佛标准"( Harvard Standards),得到国际医学界的赞同和支持。问该诊断标准的主要内容包括:(1)不可逆的深度昏迷,病人完全丧失对外部刺激和内部需要的所有感受能力;(2)自主运动包括自主呼吸运动停止,呼吸机关闭 3 分钟而无自动呼吸;(3)脑干反射消失,瞳孔放大,瞳孔对光反射、角膜反射、眼运动反射等均消失;(4)脑电沉默,脑电图平直记录 20 分钟。凡符合以上标准,并在 24 小时或72 小时内反复测试,多次检查,结果均无变化,即可宣告死亡。但是需要排除两种情况,即如果使用过镇静剂或者在低温(<32.2℃)情况下导致的昏迷,不能诊断为脑死亡。

继哈佛标准之后,不少国家和组织也相继提出了脑死亡标准。1968 年 WHO 建立的国际医学科学组织委员会规定死亡标准为:(1)对环境失去一切反应;(2)完全没有反射和肌肉张力;(3)停止自主呼吸;(4)动脉压陡降和脑电图平直。之后各国专家先后提出了30余种关于脑死亡的诊断标准,但其内容与哈佛标准大同小异。目前世界上许多国家和地区还是采用了哈佛医学院的诊断标准,并有30多个国家和地区立法通过了脑死亡标准。大量的实验表明,脑死亡标准能够科学地判定死亡。[3]

#### (三)确立脑死亡的意义

"脑死亡"概念及其诊断标准的提出,是对死亡标准的重新认识,其意义主要体现在:

#### 1.有利于促进器官移植的开展。

"脑死亡"概念和脑死亡标准并非为器官移植而定,但器官移植却因此而得益。现代医学的器官移植技术对供体的需求实现要求很高,移植的器官必须非常鲜活才有存活的可能。在适宜的新鲜供体严重短缺的现状下,依靠先进的科学技术维持脑死亡者的呼吸和循环功能,使之可能成为医学上理想的器官移植供体来源,成为人体器官和组织的天然贮存库。医师可以根据移植的需要,在充分地做好各项移植准备工作后,适时摘取供体器官,从而提高器官移植的成功率。脑死亡的确立为新鲜供体的摘取提供了合法条件。

有利于医疗卫生资源的合理利用。
现代医疗行为的宗旨并不是盲目地延长生物意

义上的生命,更不是延长人类痛苦的死亡过程。确定脑死亡的标准,可以合法地适时终止对脑死亡者的医疗措施,减少不必要的医疗支出,把有限的医疗卫生资源用于那些需要治疗而又能够达到预期效果的病人身上,在减少社会负担的同时,也减轻脑死亡亲属的精神和经济负担。

# 3.有利于科学地确定死亡,维护人的生命尊严。

现代医学科学技术,使传统的心跳、呼吸停止不再是判断死亡的绝对标准。而真正的脑死亡患者是无法复苏的。对于一些因服毒、溺水或冻死的患者,特别是服用中枢神经抑制剂自杀的假死者,运用心跳呼吸停止作为死亡标准,很难鉴别假死状态,往往放弃及时抢救的时机。脑死亡标准的确立,为死亡鉴别提供了更科学的依据,从而更有利于维护病人的生命权,更好地维护人的生命尊严与价值。

#### 4. 有利于法律的正确实施。

如前所述,"死亡"不仅是一个医学概念,而且是一个法学概念,死亡对于刑法、民法、婚姻法、继承法等几乎每一个法律领域都具有重要意义。如何科学准确地判断一个人死亡,在司法实践中显得十分重要。传统的心肺死亡标准已日益显现出局限性,而脑死亡标准的确立,可以更加科学地确定死亡,有利于正确适用法律、公平合理地处理案件。[3]

#### 三、关于脑死亡的立法思考

#### (一)国外有关脑死亡的法律规定

"脑死亡"概念和脑死亡标准的提出,引发了一系列社会伦理争论和立法探讨。芬兰是世界上第一个在法律上确立脑死亡的国家。此后,美国的堪萨斯州在 1970 年通过了《死亡和"死亡"定义法》(《Death and Death Definition Method》),这是第一个关于"死亡"定义的立法。自 20 世纪 60 年代以来,欧美一些国家先后不同程度地接受了"脑死亡"概念,具体情况大致有三种:

其一,国家制定有关脑死亡的法律,承认脑死亡 是宣布死亡的依据。例如美国、芬兰、加拿大、阿根廷、瑞典、澳大利亚、奥地利、希腊、意大利、英国、法 国、西班牙、波多黎各等国家。

其二,国家和地区法律虽然没有明文规定承认脑死亡,但临床上已经承认脑死亡状态,并用以作为宣布死亡的依据。例如比利时、德国、印度、爱尔兰、荷兰、新西兰、南非、瑞士、韩国、泰国等国家。

其三,"脑死亡"概念虽为医学界所接受,但由于 缺乏法律对脑死亡的承认,临床上也不敢推行脑死 亡标准。

1983年,美国医学会、律师协会、统一州法律监察全国会议以及美国医学和生物学与行为研究伦理

学问题总统委员会,建议美国各州采纳以下条款: "任何人患有呼吸和循环不可逆停止或大脑全部功能不可逆丧失就是死人。死亡的确定必须符合公认的医学标准。"该条款实际上是让传统"死亡"概念、标准和"脑死亡"概念、标准并存,避免人们对"死亡"定义可能产生的误会,有明显过渡性质,很快被世界很多国家接受。

为了保证和提高脑死亡诊断的准确性,防止出现偏差,有的国家法律规定,脑死亡诊断应由两名内科医师作出,且同器官移植无关联。也有的国家法律规定,脑死亡的确定,应由两名医师独立进行检查得出相同的结论,或需经上级医师的核准;必要时,还需神经内科、神经外科、麻醉科以及脑电图专家会诊,无异议时,方可确定脑死亡。[4]

## (二)我国有关脑死亡的立法思考

目前,我国对"脑死亡"的定义与标准,尚无法律 规定。是否接受"脑死亡"概念,在学术界存在分歧。 现实生活中仍以心跳呼吸停止、反射消失作为判定 死亡的唯一标准:即使医学界接受"脑死亡"的概念, 医师也不敢以其界定作为判定死亡的标准。但是鉴 于前述确立脑死亡的意义, 世界各国承认脑死亡标 准已成为发展趋势,我国医学界、社会学界、伦理学 界、法学界有越来越多的人接受"脑死亡"概念。部分 专家和学者们认为,在我国确认脑死亡的实际意义 是客观存在的, 中国大城市已经具备实施脑死亡的 条件,呼吁尽快就脑死亡立法,承认"脑死亡"概念, 确定脑死亡标准。由于我国文化传统和医学科学技 术发展状况的不平衡, 人们对脑死亡的认识还很模 糊,在短期内对脑死亡标准不可能达成共识;但是, 绝不能以脑死亡标准是否被全社会承认来判定是否 应当立法,相反应当通过立法来确认脑死亡,从法律 角度顺应形势,引导民众统一认识。

借鉴外国和我国香港特区、台湾地区的脑死亡立法经验,我国在脑死亡立法上应考虑以下问题:

#### 1.两种死亡定义和标准同时并存。

根据我国国情,确立"脑死亡"定义与标准和传统"死亡"定义与标准同时并存的制度,但是立法应对脑死亡标准的适用情况进行明确规定。这样就可

#### 参考文献

[1]梁拓,王英丽,金跃,等.我国脑死亡立法现状及问题分析[J].医学与哲学(人文社会医学版),2010,31(12):54.

[2]何悦.我国脑死亡立法的若干问题研究[J].科技与法律, 2009,82(6):18.

[3]蒲川.对我国脑死亡立法的几点思考[J].重庆交通学院学报(社科版),2001,1(3):6-8.

因人因地而异,既能防止因脑死亡误诊可能造成的 对有抢救价值的病人延误抢救,又可以使医生正确 运用脑死亡标准,对那些脑功能全部丧失处于不可 逆状态的病人及时宣布死亡。作为一种过渡,当医疗 条件和水平达到一定程度时,即可采用脑死亡标准。

#### 2.制定严格的脑死亡诊断标准。

借鉴哈佛标准,结合我国医疗实践,制定严格的脑死亡诊断标准,具体内容可以是:(1)脑死亡判定的先决条件;(2)临床诊断;(3)确认试验;(4)脑死亡观察时间。立法要赋予这样的诊断标准以法律效力,使之成为临床医生必须遵守的行为规范。<sup>[5]</sup>

#### 3.建立科学严格的脑死亡管理制度。

脑死亡立法应规定哪些医生有权作出脑死亡诊断、应按什么程序进行、使用哪些测试手段等,以防止医生的草率诊断或虚假诊断。这里主要应包括: (1)脑死亡确定医师的资格;(2)参与脑死亡确定的人员;(3)可以确定脑死亡的医院所必须具备的设备条件;(4) 运用脑死亡标准作出脑死亡诊断的合理程序;(5)脑死亡诊断书的签发。

4.在脑死亡诊断中病人合法权益的监督保护。

在运用脑死亡标准时,病人的合法权益会不会 受到侵害,这也是立法要考虑的问题。按照民法观 点,缺乏自我意识的病人的民事权利(包括其生命健 康权)应由其法定代理人负责监督和保护。因此,在 脑死亡立法中应赋予病人家属一定的权利,例如何 时关掉病人呼吸机等仪器、何时放弃抢救等,病人家 属应享有知情权和同意权;是否可以利用病人"活" 尸体或"活"器官进行实验或移植,病人家属也应享 有知情、监督和最终决定权等。

## 5. 法律责任。

脑死亡立法应当明确规定违反脑死亡法律法规的法律责任,包括:医务人员若没有严格按照脑死亡的诊断标准和管理制度,因草率诊断或虚假诊断导致病人延误抢救,情节严重的,应承担医疗事故行政责任或民事责任;医务人员或相关人员非法利用脑死亡病人的器官进行实验或移植,甚至利用脑死亡的虚假诊断故意实施杀人行为的,可依故意杀人罪、盗窃罪等追究相关人员的刑事责任。

[4]申卫星,张龙.脑死亡立法研究[M]//[美]斯科特·伯里斯,申卫星.中国卫生法前沿问题研究.北京:北京大学出版社,2005:292-329.

[5]卫生部脑死亡判定标准起草小组.脑死亡判定标准(成人)(征求意见稿)[J].中华急诊医学杂志,2003,12(2):142.

(责任编辑:梅达成、向歆)

Modern Medicine and Law

# **Death and Law**

---Legislation on Brain Death

Luo Gang Shi Junhua

Abstract: With the development of modern biomedical science and technology, death standard are increasingly attracting a widespread concern. The proposal of the concept of "brain death" and its diagnostic standards is of great significance for recognizing death standards in a new perspective. Till now, many countries have legislated on brain death standards. China should learn the legislation experiences from foreign countries and from Hong Kong and Taiwan, so as to confirm brain death through legislation and increase the general public's awareness of death.

Key Words: brain death; death standard; legislation

# I. Exploring the death standards from the perspective of law

Death is inevitable for human beings. As "death" in the usual sense, "Biology Death" refers to the withering of essential characteristics of a person, namely, the termination of life activities and metabolism of the human body. Nonetheless, with the development of modern biomedical technology, especially the evolvement of artificial reproductive and organ transplantation technology, the way of life and the standards of death also increasingly arouse a widespread concern from the society, particularly the medical profession and the legal profession. The concern of contemporary medicine and law is no longer the concept of "death" itself, but when is the moment for termination of life. The traditional concept of "death" has been increasingly and seriously challenged. Advanced efficient resurrection technology and the

artificial ventilator can help patients who have cardiac and respiratory arrest for a few hours or even more than ten hours regain their consciousness, coupled with maintenance of artificial nutrition, "come back from the dead", which all encourage people to rethink the boundaries of "life" and "dead".

There is an urgent need for defining "death" by law, and thus "death standards" should urgently be established and recognized, because death should be judged by law to provide a legal guide for clinical practice and thereby help legal personnel come to a decision on death events, so as to finish a legal task. However, a legal task relies on how to give an end for the process of death — a terminal point in accord with science and ethics and a terminal point that can decide on changes in rights and obligations in the legal sense, rather than giving a kind of perfect definition for "death". Thus, what is needed in law is actually a criterion for

judging the time point of death.

## II. Legal issues of brain death

# 1. The concept of "brain death" and death standards

"Brain death" refers to the complete loss and irreversible change of brain functionality due to severe primary injury of brain tissue or primary cerebral diseases when heart beating continues, which eventually leads to the termination of human life. As cardiac and respiratory arrest, brain death represents the termination of life phenomena and a type of individual death.

Human life activities have varying manifestations, among which respiration and heartbeat are most easily observed and measured. Therefore, cardiac and respiratory arrest has been considered as an unmistakable symbol of death since ancient times, namely the traditional cardiopulmonary death standards. It is indicated in "The Yellow Emperor's Canon of Internal Medicine" of China, "short pulse and breathlessness terminate as death". In the West, the world-famous "Black's Law Dictionary" defined "death" in 1951 as: "the complete stop of blood circulation and termination of breathing and heart beating." In clinical practice, cardiac arrest, breathing and blood pressure disappearance and temperature drops have been considered as the evidences for declaration of death. Such a traditional concept of "death" has been followed in human history for thousands of years and accepted and recognized by medicine, philosophy, religion, ethics, law and community worldwide. Nevertheless, since the 1950s, due to the progress of modern medicine, the most stable concept in human history has been accepting attacks or challenges. Modern medical research demonstrates that death is a hierarchical complex process. The loss of cardiopulmonary functionality does not mean functional termination of brain, kidneys and other major human organs. As a hierarchy of the process, cardiac and respiratory arrest is not indicative of the inevitable occurrence of death as a whole. In addition, the loss of cardiopulmonary functionality is medically reversible;

with the help of cardiac pacemakers, artificial ventilators or other advanced medical equipments, artificial maintenance can be achieved in a long-term sense. Especially, the clinical application of cardiac transplantation indicates that heart is replaceable, so it is not identical to life and thus cannot be regarded as a symbol of life. If there is any part within the human body that has a specific ability of dominating life, it is the brain. Even the highest medical achievements so far still cannot give a convincing expectation in terms of the reversibility of brain function loss. In this case, the medical rule for judgment of death — the concept of "brain death" as its standards — comes into being.

#### 2. Diagnostic standards of brain death

#### 1) Definition of "brain death"

As indicated in brain death-related laws of different countries, "brain death" is generally defined as "the whole brain death", namely, irreversible functional loss of cerebrum, cerebellum and brain stem. With regards to the diagnosis and identification of brain death, its accreditation standards relate to the proper implementation of medical behaviors and correct conduct of court trials.

#### 2) Diagnostic standards of brain death

The earliest research on brain death started in 1959. In 1968, in the 22nd World Medical Assembly, the Special Committee on Review of Death Definition from Harvard University School of Medicine put forward relatively complete diagnostic standards of brain death which are commonly referred to as "Harvard Standards" and have been endorsed and supported by the international medical community. [1] The main contents of Harvard Standards include: a) irreversible deep coma and the complete loss of the ability to feel external stimulation or internal needs; b) termination of autonomic movement, including autonomous respiration and no autonomous respiration 3 min after shutdown of the ventilator; c) disappearance of brainstem reflex, pupillary light reflex, corneal reflex or eye movement reflex, and pupil dilation, etc.; and d) brain electrical activity silence and flat EEG recording for 20 min.

Paitents meeting the above standards and displayed no changes during repeated tests and multiple inspections within 24 h or 72 h can be declared dead. However, two situations should be excluded from being diagnosed as brain death, namely coma resulting from sedatives or hypothermia (<32.2°C).

Succeeding to Harvard Standards, many countries and organizations have also raised brain death standards. The death standards defined by the Organizing Committee of International Medical Sciences established by the World Health Organization (WHO) in 1968 were as follows: a) the complete loss of responses to environment; b) completely no reflex or muscle tension; c) autonomous respiration stops; and d) dramatic decline of arterial pressure and flat EEG. Afterwards, experts from other countries put forward more than 30 kinds of diagnostic standards of brain death, which are very much the same with Harvard Standards. Till now, many countries and regions in the world still adopt the diagnostic standards of Harvard Medical School, and more than 30 countries and regions passed death standards legislatively. A large number of experiments demonstrate that brain death standards can judge death scientifically. [2]

#### 3. Significance of establishing brain death

The proposal of the concept of "brain death" and its diagnostic standards represents a new understanding of death standards, the meaing of which is mainly reflected in the following aspects:

1) Favorable to the implementation of organ transplantation

The concept of "brain death" and brain death standards are not established for organ transplantation, but the latter does benefit from its establishment. In modern medicine, organ transplantation has high requirements for donor sources. The donor for transplantation must be fresh enough to ensure survival of recepients. On the premise when there is a critical shortage of appropriate fresh donors, advanced science and technology is applied to maintain breathing and circulation of patients after brain death, making them

medically ideal donor sources for organ translation and a natural storage shed for human organs and tissues. Physicians can remove the donor organ on time on the premise of making full preparations for transplantation according to the corresponding needs, so as to improve the success rate of organ transplantation. Establishment of brain death provides legal conditions for the removal of fresh donors.

2) Conducive to the rational utilization of health re sources

The purpose of modern medical practices is neither to blindly extend life in its biological sense, nor to extend human suffering in the death process. Establishing brain death standards can legally terminate medical measures of brain-dead patients, reduce unnecessary medical expenses, apply limited health care resources to patients who need treatment and be able to achieve the desired results and mitigate mental or economic burden of brain-dead relatives while reducing social burden.

3) Beneficial to scientifically determining death and maintaining the dignity of human life

Modern medical science and technology makes traditional cardiac and respiratory arrest no longer the absolute standard for judgment of death. Real braindead patients cannot resuscitate. For those drown or frozen to death or died due to poison taking, in particular, thanatoid patients committing suicide by taking central nervous system depressants, it is difficult to discriminate thanatosis using cardiac and respiratory arrest as the standard of death, so the opportunity of timely rescue tends to be given up. The establishment of brain death standards provides a more scientific basis for identification of death and thus is more conducive to maintaining the patient's right of life and better safeguarding the dignity and worth of human life

4) Conducive to correct implementation of law

As mentioned above, "death" is no longer a medical concept, but a legal concept which plays an important role in Criminal Law, Civil Law, Marriage To scientifically and accurately judge death of a person is of great importance in judicial practice. Traditional cardiopulmonary death standards have increasingly demonstrated their limitations, while the establishment of brain death standards can determine death more scientifically and dispose cases more fairly and rationally making use of law correctly. [3]

# III. Legislation on brain death

# 1. Legal regulations about brain death in foreign countries

The proposal of the concept of "brain death" and its standards has triggered a series of social ethical debates and legislative exploration. Finland is the first one of the countries in the world establishing brain death in law. Since then, the Kansas State of the United States passed the "Death and "Death" Definition Method" in 1970, which is the first legal regulation about "death" definition. Since the 1960s, many Euramerican countires have accepted the concept of "brain death" successively to verying degrees, which can basically be assigned into three categories:

First, countries developing brain death-related legal regulations to recognize brain death as the basis for declaring death, such as the United States, Finland, Canada, Argentina, Sweden, Australia, Austria, Greece, Italy, Great Britain, France, Spain, Puerto Rico and other countries.

Second, though not specifically prescribing in national/regional law to recognize brain death, but clinically recognizing the brain-dead state and regarding it as the evidence for declaring death, such as Belgium, Germany, India, Ireland, Netherlands, New Zealand, South Africa, Switzerland, Republic of Korea, Thailand, and other countries.

Third, the concept of "brain death" has been accepted by the medical profession, but due to the lack of legal recognition of brain death, brain death standards still cannot be implemented in clinical practice.

In 1983, the American Medical Association, Bar Association, National Conference of Commissioners on Uniform State Laws and US Presidential Commission of Medical, Biological and Behavioral Research Ethical Issues recommended the adoption of the following clause among US states: "Any person suffering from irreversible respiratory and circulatory stop or the irreversible loss of full brain functionality is dead. Death should be determined in conformity with generally accepted medical standards." Such a clause actually stands for the coexistence of the traditional concept and standards of "death" and the concept and standards of "brain death", avoiding any possible misunderstanding about the definition of "death", which is obviously transitional and soon accepted by many countries throughout the world.

In order to guarantee and improve the accuracy of brain death diagnosis, and prevent bias, it is stipulated in the law of some countries that the diagnosis of brain death should be made by two internists and is irrelevant to organ transplantation. Some countries also state in law that brain death should be determined based on the same conclusion obtained after independent examinations by two physicians or subject to the approval of the superior physician; when necessary, there is also the need of neurology, neurosurgery, anesthesiology and EEG expert consultation, to determine brain death under no objection. [4]

## 2. Legislation on brain death in China

At present, there is still no legal regulation on the definition and standards of "brain death" in mainland China. Whether to accept the concept of "brain death" or not remains controversial in the academic community. Cardiac and respiratory arrest and disapperance of reflex are still used as the sole standards for determination of death in real life; even if the medical profession has accepted the concept of "brain death", physicians still dare not use it as a standard for judging death. However, in view of the foregoing significance for establishment of brain death, the world has a trend of recognizing the standard of brain death. In China, more and more people in the domains of medicine, sociology, ethics and jurisprudence accept the concept of "brain death".

Some experts and scholars believe that it is objective to confirm the practice significance of brain death in our country. China's major cities already have the conditions for implementing brain death. It is of urgency to appeal legislation of brain death, to recognize the concept of "brain death" and establish brain death standards. Due to the imbalance between China's cultural traditions and the development of medical science and technology, people's understanding of brain death is still ambiguous and it is impossible for them to reach a consensus on the standards for brain death within a short period. However, legislation of brain death should not be based on the situation whetehr brain death standards have been recognized by the whole society. On the contrary, we should confirm brain death through legislation and guide people to a unified understanding from a legal point of view and living in the present.

China should learn the legislative experience of brain death from foreign countries and China's Hong Kong SAR and Taiwan Province, taking the following issues into account:

1) Two definitions and standards of death co-exist

The system of definition and standards of "brain death" coexisting with the definition and standards of traditional "death" should be established according to China's national situation, but the conditions applicable to brain death standards should be definitely prescribed in law. In this way, it can not only prevent any possible delay in rescuing patients with salvage value due to misdiagnosis of brain death, but also help with timely declaration of death for patients in an irreversible state of losing full brain functionality by physicians making use of correct brain death standards, since conditions are variable from man to man and from region to region. As a transition, when medical conditions or levels have reached a certain extent, brain death standards can be adopted.

2) Developing strict diagnostic standards of brain death

Learning from Harvard Standards and combined with China's medical practice, we can formulate our

strict diagnostic standards of brain death with regards to the following aspects: a) the prerequisite for judgment of brain death; b) clinical diagnosis; c) validation test; and d) observation time of brain death. Such diagnostic standards can be endowed with legal validity through legislation and become behavioral norms clinicians must abide by. [5]

3) Establishing a scientifically rigorous management system of brain death

Brain death legislation should provide what kind of physicians have the right to make the diagnosis of brain death, in what procedures and using which testing tools, to prevent hasty or false diagnosis by physicians. The major contents can include: a) qualifications of physicians to determine brain death; b) personnel participating in determining brain death; c) equipment conditions of the hospital that can determining brain death; d) reasonable procedures for making brain death diagnosis through the use of brain death standards; and e) issuing the brain death certificate.

4) Supervision and protection of legitimate rights and interests of patients diagnosed as brain death

It should also legislatively consider whether the legitimate rights and interests of patients have been infringed when using brain death standards. In accordance with civil law, civil rights (including the right to life and health) of patients lacking selfconsciousness should be supervised and protected by their legal representatives. Therefore, during the legislation of brain death, certain rights should be given to the patient's family, such as when to turn off the patient's ventilator or other equipments or when to give up rescue, which are included in the rights the patient's family should enjoy the right to know or consent; the patient's family should also have the right to know, supervise and make a final decision whether a patient's "living" corpse or "living" organ can be used for experimentation or transplantation.

#### 5) Legal liabilities

Brain death legislation should make definite provisions for liabilities in violation of brain death laws

or regulations, including: medical staff should take the administrative responsibility or civil liability of medical malpractices if they cause serious delay in rescuing patients due to hasty or false diagnosis when failing to obeying the diagnostic standards and management system of brain death strictly; medical staff or related personnel should take the criminal responsibility for intentional homicide or theft if they illegally use brain-dead patients' organs for experimentation or transplantation, or even carry out intentionally killings making use of false diagnosis.

#### References

[1] Liang Tuo, Wang Yingli, Jin Yue, et al. Current Situation and Problem Analysis on Brain Death Legislation in China [J]. Medicine and Phylosophy (Humanistic & Social Medicine Edition), 2010, 31(12):54.

- [2] He Yue. Issues on the Legislation of Brain Death in China [J]. Science, Technology and Law, 2009, 82(6): 18.
- [3] Pu Chuan. On Legislation of Brain Death in China [J]. Journal of Chongqing Jiaotong University(Social Sciences Edition), 2001, 1(3): 6-8.
- [4] Shen Weixing, Zhang Long. Research on legislation of Brain Death [M]. In: Emerging Issues in Chinese Health Law, edited by Scott Burris, Shen Weixing. Beijing: Peking University Press, 2005: 292-329.
- [5] Ministry of Health Working Group on Judgement Standard of Brain Death. Judgement Standard of Brain Death (for adult)(draft). Chinese Journal of Cerebrovascular Diseases, 2003, 12(2): 142.

(Edited by Mei Dacheng and Xiang Xin)

The laws sometimes sleep, but never die.

A law is not obligatory unless it be promulgated.

Reason and authority are the two brightest lights of the world.

Evidence is to be weighted not enumerated.

— Legal proverbs