# The civil legality of the practice of orthothanasia by physicians regarding the patient's free will

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# Abstract

By constitutional interpretation based on the fundamental principle of human dignity as well as on the right to life, it is understood that the Federal Constitution ensures the right to die with dignity. However, there is no federal law regulating that right. Considering the social, juridical and philosophical issues involving dignified death, the normative gap generates legal uncertainty, which is expressed on the fear physicians have of suffering judicial sanctions for practicing orthothanasia. Therefore, this work proposes to analyze the damage liability of the medical doctor who practices orthothanasia. To that point, dignified death was conceptualized in its ethical and juridical comprehension, and then the concepts of dysthanasia, assisted suicide, euthanasia and orthothanasia were defined. It was verified that the physicians who does not practice orthothanasia, whenever elected by the patient as their treatment, perpetrates an illicit action for which they may be held liable. **Key words:** Damage liability. Ethics, medical. Right to die.

# Resumo

# A licitude civil da prática da ortotanásia por médico em respeito à vontade livre do paciente

Por meio de interpretação constitucional baseada no princípio fundamental da dignidade da pessoa humana e no direito à vida, entende-se que a Constituição Federal protege o direito à morte digna, enquanto ine-xiste norma federal que disponha sobre o tema. Considerando as questões sociais, jurídicas e filosóficas que envolvem a morte digna, a lacuna normativa gera insegurança jurídica manifesta no temor dos médicos de sofrer punição judicial pela prática da ortotanásia. Assim, o trabalho propõe-se a analisar a responsabilização civil do médico que pratica a ortotanásia. Para tanto, foram conceituadas a morte digna, sua compreensão ética e jurídica, definindo-se, então, os conceitos relacionados à distanásia, suicídio assistido, eutanásia e ortotanásia. Verificou-se que o médico que deixa de praticar a ortotanásia, quando eleita pelo paciente como seu tratamento, comete ato ilícito pelo qual pode ser responsabilizado civilmente.

Palavras-chave: Responsabilidade civil. Ética médica. Morte com dignidade.

#### Resumen

#### La legalidad civil de la práctica de ortotanasia por el médico con respecto a libre voluntad del paciente

A través de la interpretación constitucional basada en el principio fundamental de la dignidad de la persona humana y en el derecho a la vida, se entiende que la Constitución Federal protege el derecho a una muerte digna, aunque no exista una norma federal que regule sobre este tema. Teniendo en cuenta los aspectos sociales, jurídicos y filosóficos que involucra la muerte digna, la brecha normativa genera inseguridad jurídica que se manifiesta en el temor de los médicos de sufrir sanciones judiciales por la práctica de la ortotanasia. Así, este trabajo tiene como propósito analizar la responsabilidad civil del médico que practica la ortotanasia. Para ello, fue conceptualizada la muerte digna, su comprensión ética y jurídica; definiéndose entonces, los conceptos relacionados a la distanasia, suicidio asistido, eutanasia y ortotanasia. Se constató que el médico que deja de practicar la ortotanasia cuando es elegida por el paciente como su tratamiento, comete un acto ilícito por el cual puede ser responsabilizado civilmente.

Palabras-clave: Responsabilidad civil. Ética médica. Derecho a morir.

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In 2006, the Brazilian Federal Council of Medicine (CFM) issued the Resolution 1,805<sup>1</sup> which in compliance with the fundamental principle of human dignity provides about the dignified death. Despite this progress, in May 2007 the Federal Public Ministry (MPF) filed a Public Civil Action 2007.34.00.014809-3 requiring, alternatively, the nullity of the resolution or the definition of the criteria for the practice of orthonasia<sup>2</sup>.

Pleading the inadmissibility of the action it was presented a legal opinion demonstrating with primacy the definitions of orthothanasia, euthanasia and dysthanasia concepts; which allowed a better understanding of the resolution's text<sup>2</sup>. Euthanasia is understood as intentionally causing the death of a patient suffering from a terminal illness or affected by an incurable disease, practiced by a third party moved by mercy; dysthanasia, as the artificial prolongation of the degeneracy state<sup>2</sup> practiced by the doctor using extraordinary treatments; and orthothanasia, as the non-intervention in the development of natural death of patients in the terminal phase of life, when death is imminent and inevitable <sup>2</sup>. With the adoption of the grounds of that opinion, the magistrate dismissed the Public-interest Civil Action as unfounded.

This work aims to demonstrate that dignified death, as Oliveira well said, reveals *dilemmas not only legal, but also religious, social and moral*<sup>2</sup> - a fact which tends to blur the lines that distinguish concepts related to life's terminality. Hence arises the need to outline the related terms, which makes it possible to identify the behaviors that differentiate orthothanasia from euthanasia, as an example; this is a highly relevant distinction so that a lawful conduct is not taxed as criminal.

Through a constitutional interpretation based on the fundamental principle of human dignity as well as on the right to life, it is understood that the Federal Constitution ensures, implicitly, the right to die with dignity. However, the Brazilian legal system has no federal law regulating that right. Considering the legal, social, religious, medical and philosophical controversial issues involving dignified death, it shall be said that the normative and regulatory gap generates significant legal uncertainty, which is manifested on the fear of doctors to undergo judicial punishment or sanctions for practicing orthothanasia - even when they know that the practice is, in fact, lawful.

Thus, this study aims to examine, from a civil law perspective, the essential elements concerning the medical responsibility in order to verify whether the conduct of the doctor practicing orthothanasia is subject to damage liability in a legal framework.

#### Dignified death as a value and as a right

Currently, it has been highlighted the importance of communication and respect for the patient's wills to improve their well-being at the end of life. This paradigm shift emphasizes the health care focus transition from cure to care<sup>3</sup>.

In Brazil, the individual at the end of life knows very little about his own rights to a dignified death and CFM itself recognizes that a terminal patient affected by an incurable disease is often treated with innocuous therapeutic methods to combat the disease, which are able to postpone death at the expense of the patient's life quality, decreasing it<sup>1</sup>.

A dignified death must be the result of a conscious and informed decision by the patient. In this scenario, it is up to the physician to respect the will of the patient who chooses to avoid extraordinary treatments - that despite extending the quantity of life, affect its quality. At this point the physician's damage liability for the patient's death is being questioned, particularly the omission characterized as a negligent medical act. Thus, it is worth asking: can the doctor who, following the patient's will, does not perform extraordinary treatments be blamed for his death?

In order to answer this question it is necessary to add the concept of palliative care to the dignified death ethical definition, which aims to provide care to the terminally ill patient, offering him comfort and pain relief. According to the World Health Organization (WHO), palliative care consist of *an approach that seeks to improve the quality of life of patients and their families facing problems due to an incurable disease with a limited prognosis and/ or serious illness (life-threatening), through the prevention and relief of suffering by means of the early identification, appropriate assessment and rigorous treatment of not only physical problems such as pain, but also the psychosocial and spiritual*<sup>4</sup>.

From this ethical understanding of dignified death it is possible to say that this concept enjoys of constitutional protection, placing the law in accordance with the dignified death. This understanding stems from the fact that the Brazilian Federal Constitution (FC) from 1988 - therefore, the infraconstitutional legislation - have been built on the fundamental principles established in its Article 1, which underpins the principle of human dignity. The Constitution gave to the fundamental principles the condition of foundations of the Republic, making them true supreme values of the legal system. In these terms, the human dignity is a fundamental principle that, as such, cannot be abandoned by the acts of the State and its agents<sup>5</sup>.

For its relevance, the human dignity permeates the legal system interpretation, including the Constitution itself. It is impossible to speak of any other right, including the fundamental rights, in terms that deflate that fundamental principle. Accordingly, the right to life shall be interpreted under the influence of the principle of human dignity, as established by the Federal Constitution in its Article 5, caput: All persons are equal before the law, without any distinction whatsoever, Brazilians and foreigners residing in the country being ensured of inviolability of the right to life, to liberty, to equality, to security and to property, on the following terms<sup>6</sup>. Thus, the legal conformation of dignified death occurs through the protection of the right to life and the fundamental principle of human dignity, because life is a primary source of other legal interests<sup>7</sup>.

In addressing the right to dignified death it is common that this is rejected from the plan, as there is an idea of frontal antagonism against the right to life. It is understood that to safeguard dignified death would automatically mean to impose an affront to life. However, dignified death that is meant to be constitutionally safeguarded is the one that integrates the right to life itself: a natural death.

Death is nothing more than the natural end of life process. This is not an alien phenomenon to life, but intrinsic to it. The right to life, as stated, is not an absolute right; as the constitutional principles, notably the principle of human dignity, permeate the interpretation of all fundamental rights and guarantees. Thus, life protected by the Federal Constitution is a dignified life. Because natural death integrates human life, it is concluded that, while protecting life, the Constituent also protected dignified death, conforming this value into a right. Thus, while there is a right to a dignified life, one can also speak of the right to a dignified death.

Faced with the definition of dignified death ethics and the constitutional interpretation demonstrated, it is possible to conclude that the right to a dignified death is the right to receive, at the end of life, appropriate care for the preservation of the human dignity; what follows, among other consequences, the right to choose the treatment that it deems more beneficial, even if it means not to prolong life through extraordinary treatments.

# Concepts related to dignified death

In order to better address the doctor's damage liability, specifically in the case of orthothanasia - natural death care, when it is imminent and inevitable -, it is necessary to define certain concepts relating to life terminality usually confused with each other, which, however, lead to different legal consequences. The debate on dignified death highlights four key behaviors: dysthanasia, assisted suicide, euthanasia and orthothanasia.

Dysthanasia, as a rule, does not involve a patient's conduct. It is a set of medical treatments aimed at extending the survival of terminal patients. Although prolonging patient's life, dysthanasia relegates to a second place patient's quality of life. For this reason it is also known as "therapeutic obstinacy" <sup>3</sup>. In fact, there are patients who opt for dysthanasia, but this practice has almost become a standard treatment given to terminal patients who also do no participate in treatment's decision.

Assisted suicide, however, is one of the practices that are aimed at shortening life. Assisted suicide is characterized by the decision of a seriously ill person who chooses to end his/her own life. It is the patient's action himself that causes his death. There is, however, the participation of a third party who assists him in every way, providing material or moral assistance. In Brazil, assisted suicide is considered a crime under the Penal Code (PC), as provided in its Article 122. The assistant conduct will be typical even if the practice has occurred by feelings of compassion, not turning into cause of a penalty reduction, as in the case of euthanasia<sup>8</sup>.

The need to define correctly the behaviors related to terminality stands out when assisted suicide is compared to euthanasia. The element that distinguishes these behaviors (conducts), although subtle, is fundamentally important to the suitability to the correct legal result. The main difference between assisted suicide and euthanasia remains in the person whose action directly causes death. In an assisted suicide it is the patient that causes his own death; the assistant is a mere vehicle for the action. On the other hand, euthanasia, as it will be seen, presupposes that the act that causes the patient to death is fully practiced by a third party, moved by compassion.

The doctrine does not present a unanimous concept of euthanasia: some authors believe that it is only considered euthanasia the death promoted by a physician; others consider the compassion as an element that characterizes euthanasia. Roberto Dias, in a legal study on euthanasia, considers that euthanasia is the acceleration or non-extension of death, motivated by compassion, promoted by a physician upon the patient's express request or presumed will, but always in the patient's best interest, taking into account the patient's understanding of dignity<sup>10</sup>.

Thus, euthanasia is the practice that always takes place by a third party, which, within the meaning of Roberto Dias, will always be a doctor moved by compassion to others. It can occur by act or omission, accelerating the death of an individual affected by serious incurable disease and who wants to put an end at his own suffering. It is exclusively the act or omission of a third party that causes the individual's death.

The doctrine differentiates active and passive euthanasia. Active euthanasia is the act of a third party to put an end at the patient's life, through a commissive conduct - its main example is the administration of lethal drugs.

As for passive euthanasia, however, there are divergent understandings, pointing to different legal consequences. While some scholars, such as Santoro<sup>8</sup> consider that passive euthanasia is characterized by an omission conduct that gives rise to cancellation or interruption of essential treatments to maintaining the patient's life, others, as represented by Diniz<sup>9</sup>, consider that the same concept of passive euthanasia is a synonymous with orthothanasia. The last argument is deviated by distinguishing euthanasia - either passive or active - and orthothanasia as to the cause of death. In euthanasia, it is the action/omission of a third party; in orthothanasia, the disease itself. It is understood that the practice of euthanasia sets a morally relevant value in order to relate the hypothesis of a penalty reduction provided for the crime of murder, as established by the Penal Code in its Article 121, §1:

#### Simple murder

Article 121. To kill someone: Penalty - imprisonment from six to twenty years

Event of a penalty reduction

*§1* If the perpetrator commits the crime driven by significant social or moral value, or in the grip of violent emotion, immediately after the unjust provocation by the victim, the court may reduce the sentence by one sixth to one third<sup>11</sup>.

As it is set that euthanasia is a crime, to better distinguish between concepts it is important to demonstrate what the orthothanasia is. Faced with the reality of the inevitability and imminence of the patient's death, the aggressive treatments are suspended, as they are unable to benefit the patient and bring him pain and suffering at the end of life. The patient - or his/her representative - needs to consent to the measure after receiving clear information about the prognosis and available treatments. After agreement, the patient will receive palliative care.

As a rule, the terminally ill patient has the right to opt for dysthanasia - exceptional treatments that will potentially prolong the lifetime - or orthothanasia. Therefore, as opposed to dysthanasia, orthothanasia would advance death, but if the patient chooses to discard the option of extraordinary treatments and select orthothanasia, death would still occur due to the progression of the disease, at its own pace, not advancing the time of death.

However, the ethics and legality of orthothanasia practice is not limited to advancing or not the terminally ill patient's death, but it is extended to the preservation of the human dignity and the respect for the patient's autonomy and declaration of intent.

Orthothanasia is the humanization of the patient's death process, caring for the individual at the end of life, so that he can find death with comfort and minimum possible suffering, ensuring his dignity<sup>12</sup>. Consequently, orthothanasia and passive euthanasia have little in common, since the death of the terminally ill patient is not induced. In orthothanasia death is inevitable and imminent; the treatments innocuous to the reversal of the patient's condition are suspended.

The administration of palliative care removes the theory that there would be failure by health professionals, because the patient is not left alone, on the contrary, he is given every care to ensure his well-being, although the proximity of death. While dysthanasia is a common practice in hospitals, those in favor of orthothanasia argue that medicine must turn to the patient's welfare and to maintaining his dignity, reversing the current status of medical treatment of terminal patients, if this is his firm intention.

#### **Elements of Damage liability**

Three elements are required so that it conforms to damage liability: guilt, damage and causal link. The medical liability is generally subjective, i.e., it depends upon proof of professional guilt. The Brazilian Civil Code, in its Article 951, provides three kinds of guilt: negligence, recklessly and malpractice.

Article 951. The provisions of Articles 948, 949 and 950 shall apply also in the case of compensation payable by one whom, in the exercise of professional activity, by negligence, recklessness or malpractice, causes the patient's death, worsens the patient's illness, and causes injury or ineligibility him to work13.

The omission of the physician with respect to the practice recommended behaviors is considered negligence<sup>14</sup>. So, there will be medical negligence when the professional, knowledgeable of the recommended techniques, ceases to apply them to his patient, acts carelessly or even abandons the patient to his fate, recommending medical discharge or not performing the necessary tests, among various other assumptions.

Recklessness is characterized by a commissive act of the physician who, for whatever reason, does not take appropriate precautions - which he knows - when treating a patient. The care and rules are ignored by the reckless physician to protect the patient from a possible hindrance that could result in failure of the procedure. Therefore, by ignoring these precautions established by practice, the physician assumes the risk of failure.

Finally, the malpractice is the lack of knowledge or technical qualifications by the doctor.

The second element of damage liability is the damage, which results from the subtraction of a legal interest from its holder's patrimony or extra-patrimony rights<sup>15</sup>. Without the damage, even with an illegal conduct, it would be impossible to consider the perpetrator's damage liability. Damage liability lends itself to rectify the situation between the parties - debtor and creditor. If the damage does not exist, there is also no balance to be refunded.

The damage compensation is the damage liability's objective; indemnification only applies if it keeps some degree of correlation with the physician's act of guilt - commissive or omission. Such correlation is the causal link, third element of the damage liability. It is the cause and effect nexus that is established between the physician's act - commissive or omission - and the damage. The causal link is essential for damage liability, because even with an act of guilt by the physician, including an injury to the patient, there will be no chance of compensation if the experienced damage has not elapsed from that act of guilt by the physician, but from a complication of the patient's health condition, for example.

# Physician's damage liability for the practice of orthothanasia

When considering the hypothesis of damage liability of a physician who practices orthothanasia, it is necessary to consider in what it consists and what elements are necessary to set it, as its own concept prevents to consolidate the damage liability's elements.

It is stated, with respect to orthothanasia that its essential elements are: imminent and inevitable death, administration of palliative care and patient's informed consent. As to damage liability, its elements are: guilt *stricto sensu*, damage and causal link.

When practicing orthothanasia the doctor would not be acting with negligence, malpractice or recklessness, as a rule. As it is assumed that to perform orthothanasia the doctor needs to assess the patient's prognosis, worrying about his "quality of death" and autonomy, talk to him about the end of life, possible treatments and manage palliative care.

It would also be impossible to consolidate the causal link between the physician's act and the patient's death, since orthothanasia refers to terminal patients. Thus, because of the disease itself, there is no possibility of reversing the patient's condition. There is, rather, the possibility of prolonging his life, devoid, however, of quality and wellness. In this sense, it is impossible to attribute the event of death to the conduct of the physician who practices orthothanasia, especially because he has not deprived the patient of essential care, on the contrary, he has removed the safe recovery care and managed palliative care <sup>16</sup>.

It goes without saying that an unintended and unjustified death creates a both moral and material compensable damage, but it is not in all circumstances that it shall be considered damage. Today, it is possible to extend the end of life the hard way, inducing claims relating to permission to die. There is no violation of any legal provision if the physician, according to the patient's consent, suspends the extraordinary treatments and shall manager palliative care. It is true that the patient's consent is ineffective when traverses on illegal conduct, such as abortion or assisted suicide. However, the orthothanasia practice is legal, as it seeks the welfare of the terminally ill patient, and a declaration of willingness to consent orthothanasia is full effective.

In turn, the doctor who comes to submit a patient to a particular treatment against his will ends up practicing the crime of illegal constraint, unless the patient is at risk of death. In terms of damage liability, parallel to the illegal constraint provided by the criminal law, the attitude of the physician who ignores the terminal patient's declaration of will, who into full mental faculties wants to reject extraordinary interventions, characterizes negligence, in our point of view, and the professional may be civilly liable.

#### **Final Considerations**

The present study was aimed at analyzing the damage liability of the physician who practices orthothanasia, in order to evaluate whether the medical act consistently as an aid to the terminally ill patient's dignified death would be subject to damage liability in the civil sphere. For this purpose, we worked essentially with doctrinal and jurisprudential survey, but considering that orthothanasia is a theme inserted in several areas, the study demanded literature research that went beyond the civil law, entering sometimes in constitutional and criminal law, and ethics.

Finally, it is concluded that there is no way to civilly liable the physician who practices orthothanasia, as his own concept prevents the conformation of the elements of damage liability. That is, there is no guilt, damage or causal link. *There is no guilt*, whether in the form of negligence, recklessness or malpractice, because orthothanasia involves implementing palliative care and concern for the terminally ill patient's welfare, thus occurring diligence (attention to the patient's "quality of death"), prudence (affirming the patient's terminality and obtaining his informed consent) and technical knowledge (palliative care, involving different branches of medicine and other extraneous to it). Nor can one speak of damage as it is not always that death must be understood as damage. Damage is a violation of a legally protected right, that in the case of death, is life itself. However, as noted, death does not necessarily result from human interference - or inaction -; in case of natural death the configuration of damage does not exist. It is, therefore, the cause of death which is the damage, not the death itself. Orthothanasia exists by the patient's consent at the end of life, which configures that the physician has attended to the patient's subjective right to choose his own treatment, with no behaviors that directly cause death. It is therefore a physician ethical behavior and an exercise of the right to autonomy of the patient.

There is no causal link between the physician's act and the patient's death, as orthothanasia only exists in relation to terminally ill patients, i.e., death occurs due to the progression of the disease, as the extraordinary treatments would be managed to prolong the amount of life and palliative care work in improving the quality of life.

Still in the analysis of medical damage liability and orthothanasia, an adjacent conclusion could be reached. When rejecting the declaration of intents of the terminally ill patient who requires the suspension of extraordinary treatments, the physician acts with guilt in the form of negligence resulting in material damage, as he wounds the patient's dignity and autonomy; the physician shall be blamed. Thus, it is understood that the physician who practices orthothanasia cannot be civilly liable for the act itself or the subsequent patient's death. Rather, he acts to ensure the autonomy of the patient aiming to improve the quality of death as much as possible, in a real implementation of the principle of human dignity.

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#### References

- Conselho Federal de Medicina. Resolução nº 1.805, de 9 de novembro de 2006. Na fase terminal de enfermidades graves e incuráveis é permitido ao médico limitar ou suspender procedimentos e tratamentos que prolonguem a vida do doente, garantindo-lhe os cuidados necessários para aliviar os sintomas que levam ao sofrimento, na perspectiva de uma assistência integral, respeitada a vontade do paciente ou de seu representante legal. [Internet]. 2006 (acesso 22 out. 2013). Disponível: http://www.portalmedico.org.br/resolucoes/CFM/2006/1805\_2006.htm
- Conselho Federal de Medicina. A ortotanásia na justiça brasileira. [Internet]. Revista Bioethikos. 2010 (acesso 22 out. 2013);4(4):476-86. Disponível: http://www.saocamilo-sp.br/pdf/ bioethikos/80/Bioethikos\_476-486\_.pdf
- Forte DN. Associações entre as características de médicos intensivistas e a variabilidade no cuidado ao fim de vida em UTI. [tese]. [Internet]. São Paulo: Faculdade de Medicina da USP; 2011 (acesso 22 maio 2013). Disponível: http://www.teses.usp.br/teses/disponiveis/5/5169/tde-07122011-124313/pt-br.php

- Instituto Nacional de Câncer. Cuidados paliativos. [Internet]. (acesso 22 maio 2013). Disponível: http://www.inca.gov.br/conteudo\_view.asp?ID=474
- 5. Silva JA. Comentário contextual à Constituição. 6ª ed. São Paulo: Malheiros; 2009. p. 38.
- Brasil. Constituição da República Federativa do Brasil de 1988. [Internet]. 1988 (acesso 22 maio 2013). Disponível: http://www.planalto.gov.br/ccivil\_03/Constituicao/Constituicao.htm
- 7. Silva JA. Op. cit. p. 66.
- 8. Santoro LF. Morte digna: o direito do paciente terminal. Curitiba: Juruá; 2010. p. 188.
- 9. Diniz MH. O estado atual do biodireito. 2ª ed. São Paulo: Saraiva; 2002. p. 840.
- 10. Dias R. O direito fundamental à morte digna: uma visão constitucional da eutanásia. Belo Horizonte: Fórum; 2012. p. 239.
- 11. Brasil. Decreto-lei nº 2.848, de 7 de dezembro de 1940. [Internet]. Código Penal. 1940 (acesso 22 maio 2013). Disponível: http://www.planalto.gov.br/ccivil\_03/decreto-lei/Del2848compilado. htm
- Bostiancic MC, Dadalto L. Diretivas antecipadas para tratamentos médicos: um estudo comparado entre o direito brasileiro e o argentino. Mar del Plata: Universidad Nacional de Mar del Plata; 2010. p. 351.
- Brasil. Lei n° 10.406, de 10 de janeiro de 2002. Código Civil. [Internet]. 2002 (acesso 22 maio 2013). Disponível: http://www.planalto.gov.br/ccivil\_03/leis/2002/L10406compilada.htm
- Kfouri Neto M. Responsabilidade civil do médico. 7ª ed. São Paulo: Editora Revista dos Tribunais; 2010. p. 652.
- Lopez TA. O dano estético: responsabilidade civil. 2ª ed. São Paulo: Editora Revista dos Tribunais; 1999. p. 125.
- 16. Santoro LF. Op. cit. p. 147.

#### Participation of the authors

Maria Luiza Monteiro da Cruz worked in the design, analysis and writing of this article. Reinaldo Ayer participated in its critical review.

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