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Identifying practical clinical problems in active euthanasia: A systematic literature review of the findings in countries where euthanasia is legal

Madoka Kono[1], Nana Arai, M.D., M.P.H., PH.D.,[1,2] and Yoshiyuki Takimoto, M.D., PH.D.[1,2]

[1]Department of Biomedical Ethics, Faculty of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo, Japan and [2]Patient Relations and Clinical Ethics Center, The University of Tokyo Hospital, Bunkyo-ku, Tokyo, Japan

Review Article

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Author for correspondence:
Yoshiyuki Takimoto, Department of Biomedical Ethics, Faculty of Medicine and Department of Psychosomatic Medicine and Stress Science, The University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan.
Email: takimoto@m.u-tokyo.ac.jp

Abstract

Objectives. Currently, active euthanasia is legalized in only 7 countries worldwide. These countries have encountered problems in its implementation. The study aims to summarize the practical clinical problems in the literature on active euthanasia.

Methods. A systematic literature review was conducted using 140 works consisting of 130 articles from PubMed and EthxWeb and data from 10 euthanasia laws.

Results. After reviewing the specific problems reported to be associated with euthanasia in each country, 5 problems were extracted: many ambiguous conditions with room for interpretation, insufficient assurance of voluntariness, response to requests for euthanasia due to psychological distress, conscientious objection, and noncompliance by medical professionals.

Significance of results. Multiple ambiguous conditions that are open to interpretation can result in a "slippery slope phenomenon." An insufficient guarantee of voluntariness violates the principle of respect for autonomy, which is the underlying justification for euthanasia. In cases of euthanasia due to mental anguish, a distinction between a desire for death caused by psychological pain alone prompted by mental illness and a desire for death caused by mental symptoms prompted by physical illness is essential. Conscientious objection should remain an option because of the heavy burden placed on doctors who perform euthanasia. Noncompliance by medical professionals due to ignorance and conflicts regarding euthanasia is contrary to procedural justice.

Introduction

Currently, euthanasia is legalized in only a few countries or regions globally. However, approximately 20 years have passed since euthanasia was legalized in the Netherlands, the first to do so. This is one of the most advanced countries practicing euthanasia, and an increasing number of other countries, especially in the West, have followed suit. For example, Spain legalized euthanasia in 2021, and discussions are ongoing in Japan and other Asian countries. However, in countries where euthanasia is legalized, although the criteria for euthanasia are set, various problems have arisen in the practice of euthanasia. For example, it has been reported that many Dutch physicians feel pressure to accept euthanasia requests caused by doubts about fulfilling the criteria and counterpressure from the patient's relatives (de Boer et al. 2019). They doubted whether they met the criteria when they were faced with the decision to euthanize a patient without sufficient time for discussion. It is also noted that for physicians, the decision to euthanize patients with dementia or other psychiatric disorders is complex and distressing (Schuurmans et al. 2019).

Moreover, cases of euthanasia being performed in secret without clear rules have also been reported in some countries where euthanasia is illegal. For example, in Japan, the contract killing of patient with amyotrophic Lateral Sclerosis (ALS) occurred in November 2019. Although this incident was performed as euthanasia, it did not meet the standards for euthanasia in countries where the practice is legal, and one of the reasons for this incident is the immature understanding of euthanasia.

It would be useful for Japan and other countries currently discussing the legalization of euthanasia to summarize what criteria have been established in countries where euthanasia is already legalized and what problems are faced when euthanasia is implemented according to the criteria already established by law.

Euthanasia is primarily categorized as active, passive, and indirect euthanasia. Passive euthanasia is the withholding or withdrawal of life-sustaining treatment, etc., leaving the patient

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Table 1. Exclusion criteria for the screening

(a) Literature involving nonhuman targets
(b) Literature in which euthanasia was not the main theme
(c) Literature with inadequate reference to the problem
(d) Studies for which the text was unobtainable

to die, while indirect euthanasia is the performance of an act intended to eliminate or alleviate suffering, even though it may shorten life secondarily. Of these, this study focuses on active euthanasia because of the contradictory nature of this medical action (i.e., its main purpose is to shorten life). Thus, we aimed to summarize the requirements, standards, and problems of active euthanasia in relation to the laws of countries where euthanasia is legal to provide a reference for the inevitable discussions on euthanasia that will emerge worldwide in the future.

Methods

Literature search and collection

In this study, we conducted a literature search with the following 3 objectives: identify the clinical issues associated with it in countries where euthanasia is legal, survey euthanasia laws in countries where it is legal, and survey euthanasia-related discussions in these countries.

PubMed and EthxWeb were searched using the keywords "euthanasia and criteria" to collect full-text literature on the topic, with the search in PubMed being conducted from 2000 to the summer of 2020. We used a Google search to survey euthanasia laws in countries where it was legalized by March 2021. Finally, to evaluate the current situation of euthanasia in countries where it had previously been legalized, we used the Medical Journal and PubMed databases to search for euthanasia plus country names and collected relevant reports. In addition, a snowballing method search was conducted. For the discussion section, references were cited through June 2022.

Screening method for database search

A total of 1,036 studies were retrieved from PubMed and EthxWeb and screened using the exclusion criteria shown in Table 1.

Analytic methods

The subject studies collected were analyzed qualitatively using a thematic analysis, a research method used to find themes in the qualitative data (Boyatzis 1998). The first author read the studies; conceptualized the information in relation to the requirements, standards, and problems of active euthanasia; and coded the data to prevent a loss of meaning or distortion of the content of the text. The codes were further sorted into categories based on similarity. The first author conducted the coding process with regular discussions with the other authors on 15 occasions. In addition, multiple peer debriefings regarding the methods, processes, and analysis results were conducted with researchers from academic backgrounds in medicine (psychosomatic medicine, gastroenterology, emergency medicine, and pediatric psychiatry), philosophy and ethics, economics, and education to ensure the validity of the analysis (Morse 2015).

Results

Summary of the literature search results

A total of 140 works were selected for the analysis (Figure 1). The breakdown by type is as follows: 82 original research works, 19 reviews, 10 laws, 7 editorials, 6 case studies, and 16 other works. The country breakdown of nonlegal research is as follows: 35 in the Netherlands, 27 in the US, 18 in Belgium, 13 in Canada, 11 in the UK, 4 in Germany, and 22 in other countries.

Countries where euthanasia is legal

The 7 countries where euthanasia is legal (Emanuel et al. 2016) are the Netherlands (Government of the Netherlands, Euthanasia n.d.), Belgium (Ministerie van Justitie [Ministry of Justice] Belgium 2002), Luxembourg (Le Gouvernement du grand-duche de Luxembourg 2009), Canada (Government of Canada n.d.), Colombia, Spain (Ley Orgánica. 3/2021: Espana legaliza la eutanasia [Spain legalises euthanasia] 2021), and New Zealand (New Zealand Legislation 2019). In Colombia, euthanasia is not legalized by law but is practiced based on a 1997 ruling that euthanasia is a noncriminal offense. Since then, although there have been moves to legalize it, it has yet to be enacted into law (Benavides 2018). In 2015, the Ministry of Health prepared guidelines with specific procedures and requirements (Cook 2021), and in 2018, children were added to the list (https://latinamericanpost.com/20090-colombia-has-regulated-euthanasia-for-children-and-adolescents, 2018). The guidelines could not be referenced due to security reasons.

Euthanasia requirements in each country

The requirements stated in the euthanasia laws in the countries where it has been legalized are listed in Table 2.

Target age range

Belgium is the only country that allows euthanasia for patients of all ages. In the Netherlands, euthanasia is allowed for patients aged 12 years and older. The remaining 4 countries (Luxembourg, Canada, Spain, and New Zealand) allow euthanasia for patients aged 18 years and older. Belgium and Switzerland, which allow euthanasia for minors, do not allow it under the same conditions as adults but add special conditions, such as allowing it only for physical pain and requiring parents to provide consent and participate in the decision-making process. In both countries, the age range for euthanasia has expanded since the enactment of the law, resulting in the current system. In the Netherlands, euthanasia is not allowed for those under 12 years of age; however, the Groningen Protocol (Gesundheit et al. 2009) has been published as a standard for euthanasia in neonates, and there is still much debate about its pros and cons.

Life expectancy for which euthanasia is legal

In terms of life expectancy requirements for administering euthanasia, New Zealand specified a 6-month limit. Two countries (the Netherlands and Switzerland) did not, and 4 countries had ambiguous criteria as follows: Belgium (terminal, the condition was only for minors), Luxembourg (terminal), and Spain (con un pronóstico de vida limitado [not too remote]). In Canada, life expectancy in definite numbers is not given. However, the target requirements for euthanasia are defined separately for

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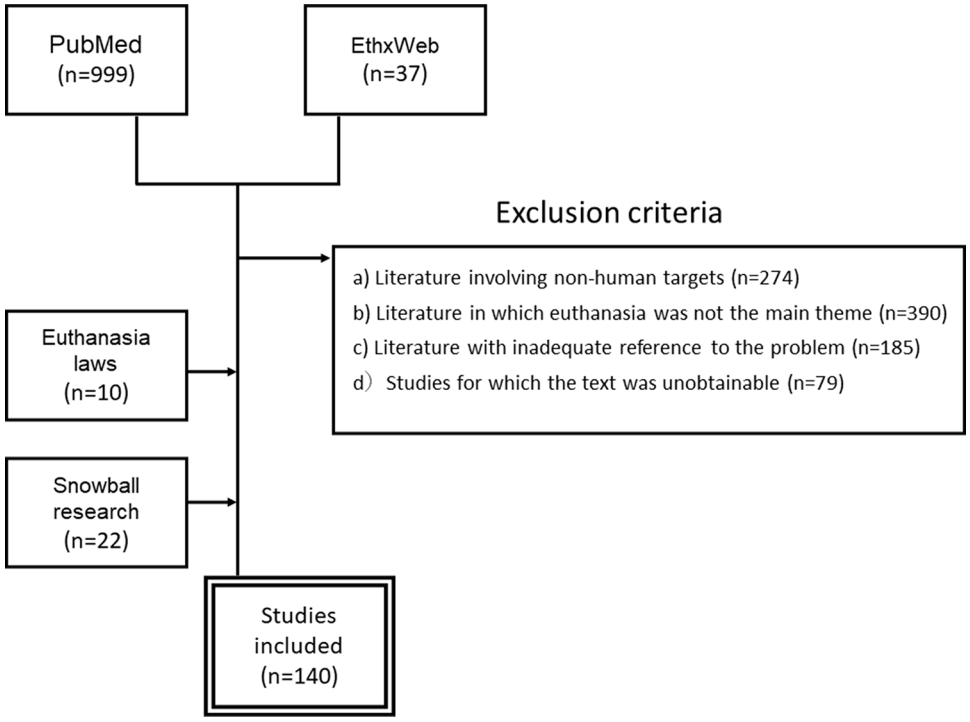

Fig. 1. Flowchart of study selection.

Table 2. Euthanasia requirements according to each country's laws

	Year of enactment	Age	Means of expression	End-of-life conditions	Presence or absence of a requirement to consult an independent physician	Existence of an after-the-fact reporting system	Whether or not euthanasia is allowed for psychological pain alone	Whether advance directives are valid for euthanasia
The Netherlands	2002	12+	Document	Not mentioned	Present	Present	Allowed	Effective for patients 16 years and older
Belgium	2002	All	Document	Only children are stipulated	Present	Present	Allowed	Valid
Luxembourg	2009	18+	Document	Not mentioned	Present	Present	Allowed	Valid
Canada	2016 (revised 2021)	18+	Document	Not mentioned	Absent	Absent	Not allowed (until March 2023)	Not valid
Columbia	2015	18+	Unknown	Terminal	Unknown	Unknown	Unknown	Unknown
Spain	2021	18+	Twice in writing	Limited life expectancy	Present	Present	Allowed	Valid
New Zealand	2021	18+	Document	Life expectancy within 6 months	Mentioned	Present	Not allowed	Prohibited

"persons whose natural death is reasonably foreseeable" and "persons whose natural death is not reasonably foreseeable."

Methods and period of manifestation of intention

In all 7 countries, a written statement of intent, and not just a verbal one, is required for the procedure. With regard to the number of notices of intent and the time frame for implementation, the Netherlands, Luxembourg, and New Zealand have no specific provisions; Belgium requires 1 verbal and 1 written statement of intent; and Belgium requires 1 month between the written statement and euthanasia if the patient is not terminally ill. In Spain, 2 written statements are required, with a 15-day gap between them. In Canada, there is no time gap between a written statement of intent and euthanasia when death is reasonably foreseeable and a mandatory 90-day assessment period when death is not reasonably foreseeable.

Consultation with an independent doctor

Consultation with an independent doctor means consultation with a doctor who is not directly involved with the patient. Consultation with a physician independent of the case is mandatory, except in Canada.

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Ex post facto reporting system

All analyzed countries except Canada require cases of euthanasia to be reported to the national ethics committee. In many countries, the report format and committees are described in the law.

Euthanasia due to mental anguish

The Netherlands, Belgium, Luxembourg, and Spain are the 4 countries where euthanasia for mental anguish with comorbid physical illnesses is legal. On the other hand, euthanasia for mental suffering is illegal in New Zealand and Canada. In Canada, however, euthanasia for mental anguish is not legally allowed, but there are reports of cases of euthanasia for mental anguish and the problems associated with it (Perreault et al. 2019).

Advance directives for euthanasia

An advanced euthanasia directive (AED) is a statement wishing euthanasia to be performed at a specific point in the future (e.g., a certain point of deterioration in the patient's condition). Four countries (the Netherlands, Belgium, Luxembourg, and Spain) recognize the validity of this statement in their euthanasia laws. These 4 countries also allow euthanasia for mental anguish as the main reason and allow euthanasia to be performed with a clear statement of intent in advance, even when the patient is incapacitated due to mental illness. Even in these countries, there is no set documentation format for AEDs. However, in New Zealand, euthanasia with an advance directive is explicitly prohibited by law.

On conscientious objection

Conscientious objection is the refusal to provide treatment due to the health-care provider's personal feelings and beliefs (Goligher et al. 2018). Conscientious refusal or refusal on religious grounds to perform euthanasia is explicitly allowed in Belgium, Luxembourg, Spain, and New Zealand. In Canada, conscientious objection was recognized in a Supreme Court decision (Landry et al. 2015) and the law.

Current status of countries where euthanasia is legal

Reasons for euthanasia request

The actual reasons for euthanasia requests on medical grounds in countries where it is legal vary widely. The Netherlands and Belgium, where euthanasia has been legal for a longer time, allow it for a wide range of reasons, and cancer is the most common reason for euthanasia requests (Euthanasia in Belgium, The Netherlands and Luxembourg 2013). The physical pain in terminal cancer is often categorized as unbearable pain, which is a requirement for euthanasia. In addition, euthanasia has been approved for intractable diseases such as ALS and vegetative states caused by road traffic accidents (Bascom et al. 2002). The nature of the suffering is also one of the reasons for the euthanasia request. Psychological conditions that lead to euthanasia include mood disorders, dementia, and post-traumatic stress disorder (Dierickx et al. 2017). However, in the Netherlands and other countries, the reasons for euthanasia are not only medical but also social such as loneliness without social support or uncertainty about the future (Snijdewind et al. 2018).

Euthanasia techniques

In terms of techniques, barbiturates were often used; however, opioids were occasionally used when medical personnel were reluctant to euthanize the patients (Smets et al. 2010b).

Problems in countries where euthanasia is legal

After reviewing the specific problems reported to be associated with euthanasia in each country, 5 problems were extracted.

Ambiguous criteria leave room for interpretation

One of the problems cited in countries where euthanasia is legal is that the ambiguous requirements can confuse physicians when deciding whether to allow a patient to be euthanized (Buiting et al. 2008). These ambiguous conditions include unbearable pain, life expectancy, and a lack of rational means. When nonphysical aspects of suffering are central in a euthanasia request, variations in physicians' judgments of patients' unbearable pain have been reported (Rietjens et al. 2009).

The definition of unbearable pain varies among patients. For example, in clinical practice, a patient complains of unbearable pain, but the attending physician recognizes that the pain is within the range of tolerable pain, and the treatment plan is adjusted accordingly (Hanssen-de Wolf et al. 2008). However, Buiting reported that while medical professionals often must make objective judgments about the pain experienced, if the patient reports that the pain is unbearable, it should be recognized as unbearable (Buiting et al. 2008).

As for the conditions regarding life expectancy, while states in the US define a life expectancy of 6 months or less as the condition for euthanasia, many other countries use the term "terminal" ambiguously. Requests for euthanasia by patients with a life expectancy of 6 months or more have been reported to put pressure on physicians (Evenblij et al. 2019), and the lack of a specific length of life expectancy causes problems in the practice of euthanasia (Sprung et al. 2018). Moreover, in patients with conditions such as cardiac diseases, determination of the prognosis is difficult (Bergman et al. 2020).

According to the proceedings in the Parliament of the Netherlands, the physician should discuss all available palliative options with the patient before deciding whether to euthanize or assist in suicide (Kouwenhoven et al. 2019). The condition set forth in many countries is that the criteria for euthanasia are not met if there is an effective palliative treatment for the patient. One problem with this approach is that if the patient rejects the effective treatment, the treatment cannot be implemented, and the patient will not be relieved of suffering (Mondragón et al. 2019).

Insufficient assurance of voluntariness

Voluntariness is frequently highlighted as an issue related to euthanasia, considering the lack of clarity over what constitutes a voluntary and deliberate expression of intent (Buiting et al. 2008). In the current euthanasia systems, there are several requirements to ensure voluntariness, such as multiple declarations of intent in writing, a period between the declaration of intent and the execution of the procedure, confirmation of the intent at the time of execution, and in some countries, restrictions on the age of the euthanized patient. However, in some cases, voluntariness may not be sufficiently ensured in the field (Marina et al. 2022). For example, in cases where a person's ability to make decisions deteriorates as the condition progresses, it is difficult to determine whether the person's intentions are based on an understanding and careful consideration of the medical condition and possible treatments (Mondragón et al. 2019).

In contrast, there are also cases in which euthanasia is performed, despite the lack of an explicit declaration of intent

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(Cohen-Almagor 2015). Such cases have been reported in elderly patients. The reason euthanasia is performed even though the patient's latest intentions cannot be confirmed is that the patient's prognosis is short (only about a week), so even if euthanasia is performed, it does not accelerate the patient's death (Smets et al. 2010b). In the Netherlands, a physician was prosecuted for insufficient assurance of patient voluntariness when he performed euthanasia based solely on confirmation from the patient's family without confirming the patient's wishes, even though the patient had requested euthanasia in an advance directive (ultimately, no criminal charges were filed) (Asscher and van de Vathorst 2020). A study conducted in Oregon (Ganzini et al. 2006) found that the individual's intention to euthanize themselves and the family's estimate of the individual's intention tended to be inconsistent.

Euthanasia due to mental anguish

The difficulty in making euthanasia-related decisions in patients experiencing mental anguish associated with physical illness has been previously highlighted. One reason for these difficulties is that the progression of symptoms in such patients is difficult to predict, and the limits of treatment are difficult to define (Kelly 2017). For example, some patients whose symptoms did not improve with regular treatment may show a sudden improvement as a result of a trivial event. Additionally, in the case of mental anguish caused by social factors, a factor change may result in dramatic improvement.

Moreover, in patients experiencing severe mental anguish, the subjective nature of their pain makes it extremely difficult to determine what constitutes unbearable pain compared with physical pain (Johnson et al. 2014). In addition, the possibility of experiencing pain that is not present due to the fabrication of symptom-derived memories has also been highlighted (Mondragón et al. 2019).

Furthermore, ensuring voluntariness can be very difficult when mental illness is present. In some cases, the symptoms include thoughts of death, and it is difficult to determine whether the person's intention is voluntary or caused by mental illness symptoms (Dierickx et al. 2017). Moreover, in conditions such as dementia, the intention at the time of execution cannot be confirmed due to a decline in judgmental ability, and there is a possibility that the person cannot respond to changes in intention (Mondragón et al. 2019).

Conscience-based refusal

Conscience-based refusal is the refusal of a particular medical treatment based on the health-care professional's conscience (Munthe and Nielsen 2017). Conscience-based refusals are described here to include resistance not only based on professional ethics but also from religious beliefs. In many countries where euthanasia is legal, conscience-based refusals have been permitted by law or by Supreme Court decisions. A survey conducted in the Netherlands found that approximately 20% of physicians were resistant to euthanasia for personal reasons (Georges et al. 2008). However, the problem is that patients do not understand this and perceive euthanasia as a patient's right; thus, they believe that they will be euthanized if they express their wishes after satisfying the conditions of great suffering and incurability (Snijdewind et al. 2018). This has resulted in cases wherein patients have pressured medical professionals to perform euthanasia, even though they are unwilling to do so because of their personal values (de Boer et al. 2019).

Noncompliance among medical providers

The literature search revealed euthanasia cases that did not meet the standards set by the law in the respective countries. For example, in a Belgian study, only 52.8% of euthanasia procedures performed were reported to the ethics committee (Smets et al. 2010a). In the Netherlands, the reporting rate was over 80%, and the low reporting rate was thought to be attributable to the misunderstanding caused by the short history of the euthanasia debate (van der Heide et al. 2007). Furthermore, in 76.7% of the unreported cases, medical treatment performed by the doctor was not recognized as euthanasia. Other reasons for not reporting euthanasia cases that were recognized as euthanasia included procedural violations, such as failure to obtain a written statement of intent, the use of drugs not typically used for euthanasia, and the fact that the patient's prognosis was originally short, and euthanasia did not shorten the patient's life. Administration of lethal drugs without patient request occurred in 1.7% of all deaths in the Flanders region of Belgium alone (Chambaere et al. 2015) and 0.2% of all deaths in the Netherlands (Onwuteaka-Philipsen et al. 2012).

Other violations observed were cases in which a physician consulted with another physician involved in the case, despite the requirement to consult with a physician independent of the case (Miller and Kim 2017). While consultation with an independent physician is mandated to promote objective decision-making, some have pointed out that euthanasia has many criteria based on personal discretion, such as the degree of pain experienced by the patient, and that the lack of intimacy between the independent physician and the patient makes the decision difficult because of the lack of knowledge about the patient (Bergman et al. 2020).

Discussion

Analysis of the law

There are 3 areas of controversy in euthanasia laws: age, advance directives for euthanasia (ADEs), and the validity of euthanasia for mental anguish. The validity of allowing euthanasia due to mental anguish will be discussed later due to the complexity of the ethical issues involved. With respect to age, the pros and cons of allowing euthanasia for minors are still being debated, even in countries where it is legal. One reason for allowing euthanasia for minors is that minors who have experienced enough pain to consider euthanasia are mentally more mature (Van Assche et al. 2019) and can make decisions about their lives (Smets et al. 2009). Conversely, the reasons for not allowing euthanasia for minors include doubts about whether they can make life and death decisions on their own and concerns about depriving them of the happiness they may gain in future (Council of Canadian Academies, The Expert Panel Working Group on MAID for Mature Minors 2018; Lamb 2021). Thus, the age limit remains a subject of debate in countries where euthanasia is legal (Van Assche et al. 2019). Furthermore, it is unclear whether minors have the capacity to make decisions about life and death, and since parental will is deeply involved in the expression of a minor's will, it is impossible to guarantee voluntariness.

Regarding the validity of ADEs, many cases have reported that ADEs are valid in countries that clearly allow euthanasia due to mental suffering. This is because euthanasia due to psychological pain is often caused by conditions such as dementia, and as the disease progresses, the ability to make decisions deteriorates (Groenewoud et al. 2022). Moreover, in some cases, the ability to make decisions is insufficient when the patient is experiencing

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so-called unbearable pain (Grassi et al. 2022). The effectiveness of ADEs has been recognized to prevent patients from not being relieved from pain for this reason; however, the implementation of these ADEs may be problematic in some cases. For example, some ADEs are ambiguous, stating that euthanasia should be carried out when the appropriate time comes or stating that euthanasia should be carried out when the patient is unable to recognize his or her family, even though the patient seems to enjoy interacting with family members without recognizing them (Mangino et al. 2020). In such cases, the validity of the advance directive is questionable (Van Assche et al. 2019), and 42% of GPs in the Netherlands do not agree with ADEs and say they will not perform euthanasia according to ADEs (Schuurmans et al. 2021). To avoid such situations, the contents of ADEs should be more concrete than at present. It is necessary to share cases in which physicians were confused about decisions regarding the contents of ADEs and to improve the format of ADEs by referring to the shared cases to reduce the risk of confusion in interpreting the contents

Analysis of the current situation in countries where euthanasia is legal

The results demonstrated that cancer was the most common reason for euthanasia, accounting for 75% of all euthanasia cases in the Netherlands, Belgium, and Luxembourg. However, the rate of reporting euthanasia is low, so this figure is open to speculation. Additionally, euthanasia rates were reported to be high for diseases such as ALS and cancer, which cause unbearable suffering in the terminal stages (Maessen et al. 2010). However, they were low for diseases such as heart disease, where euthanasia is rare and the prognosis is difficult to predict (Hanratty et al. 2002). Therefore, the proportion of cancer cases among patients receiving euthanasia (75%) may be overestimated.

Analysis of the problems

Ambiguous criteria leave room for interpretation

Ambiguities in the interpretation of the requirements for euthanasia may lead to instances of legally questionable euthanasia that is conducted by expanding the scope of euthanasia permitted by law, which could lead to a "slippery slope phenomenon" in which the scope of euthanasia continues to expand beyond what was generally permitted (Shariff 2012). While euthanasia for mental anguish is widely practiced (Lerner and Caplan 2015), there exists a disagreement regarding the legal validity of euthanasia for reasons of mental anguish (Perreault et al. 2019). This discrepancy may be attributed to the presence of the term "not too remote" in the conditions regarding life expectancy, which only enforces a vague stipulation that natural death is not significantly far off.

The practice of euthanasia is a sensitive subject that involves careful consideration of medical ethics, thus making it necessary to adhere to uniform standards. Ambiguous criteria can easily lead to a slippery slope phenomenon, and there is some concern that euthanasia may be used beyond what is generally accepted. If this were to happen, there is a risk that euthanasia could ultimately be misused, for example, in the case of indiscreet suicide or murder, which would go beyond the scope of medical treatment. For example, if a legal system were to allow euthanasia in patients who refuse rational means, there is concern that a slippery slope would occur in such a situation, resulting in indiscreet suicides and forced euthanasia.

Insufficient assurance of voluntariness

To ensure voluntariness, many countries require multiple declarations of intent and written as well as verbal declarations of intent (Marina et al. 2022). Insufficient assurance of voluntariness violates the principle of respect for autonomy, which is one of the justifications for euthanasia. Although it is an act that can be performed only when the patient voluntarily and thoughtfully requests relief from their suffering, euthanasia falls outside of the scope of medical treatment. Moreover, it is also undeniable that the lack of voluntariness may lead to unwanted euthanasia in patients with short prognoses or impaired judgment. In cases that have occurred so far, the latest intentions have been estimated based on past words, actions, and expressions of intentions (Mangino et al. 2020; Van Den Noortgate and Van Humbeeck 2021). However, there is a risk that even these may not be sought in some cases.

Euthanasia due to mental anguish

The 2 ethical principles underlying the concept of euthanasia are the principle of respect for autonomy and the principle of good conduct in the sense of relief from suffering (de Haan 2002). However, euthanasia based mainly on psychological pain may violate both principles. First, it is difficult to determine whether the wish for euthanasia is due to autonomous pain or a desire to die as part of the mental illness symptoms. In addition, it is difficult to determine whether the psychological pain can be alleviated any further, and since the perception of pain itself is subjective, the medical professional cannot conclusively determine whether the pain experienced by the patient is truly unbearable. The limits of euthanasia are more unpredictable than those of physical pain because sudden changes in the patient's condition may be prompted by a trivial event or an event in which the patient's mental anguish is caused by multiple factors, and the resolution of one of these factors may be sufficient to substantially alleviate the pain. Since euthanasia is expected to be administered in the absence of any reasonable alternatives, it cannot be performed until the limits of palliation are determined.

However, there are cases in which patients have the mental capacity and are autonomous, even if they have a comorbid mental illness (Curley et al. 2021). Furthermore, some argue that palliative psychiatry is also necessary (Trachsel et al. 2019). In cases of comorbid psychiatric disorders, the patient should not be unconditionally excluded from euthanasia from the viewpoint of respect for autonomy; rather, a more careful procedure should be followed to determine whether the patient's wish for euthanasia is a true intention or a symptom of psychotic ideation.

Conscience-based objection

Euthanasia is also a psychologically burdensome act for medical professionals who provide it (Evenblij et al. 2019); moreover, some medical professionals are strongly resistant to euthanasia because of their own professional ethics and religious values and feel moral distress in not being able to provide euthanasia because they perceive that they are not providing superior medical care (Heilman and Trothen 2020). Conscientious objection to euthanasia can be conceived as a requirement of the moral imperative to do no harm (Saad 2019). For these reasons, the option of conscientious objections should always be available for medical professionals. In contrast, some argue that doctors are obligated to perform euthanasia, considering the principles of justice (Savulescu and Schuklenk 2017). They argue that it is unfair for some patients to receive euthanasia while others, with the same level of pain and suffering, cannot receive it because of conscientious objection.

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However, since this problem can be solved if the doctor who makes the conscientious objection gives a letter of referral to another doctor, it is difficult to consider this a serious violation of the principles of justice.

Noncompliance among medical providers

The standards set to avoid the "slippery slope phenomenon" are not followed in some euthanasia cases (Chambaere et al. 2010). However, such noncompliance is contrary to procedural justice and may lead to the rampant use of euthanasia (Virtanen and Elovainio 2018). Moreover, noncompliance with after-the-fact reporting guidelines can obscure the "slippery slope phenomenon" even after it has already occurred. In the Flanders region of Belgium, only half of all euthanasia cases are reported. If a slippery slope phenomenon occurs, the after-the-fact reporting system may be ignored (Smets et al. 2010a). In addition, ambiguity over the scope of what medical professionals recognize as euthanasia may cause inequity in its implementation, which may violate the principle of justice.

Noncompliance may be caused by the ignorance and conflicts of medical professionals. Ignorance refers to unclear knowledge of the criteria for euthanasia, while conflicts refer to situations where medical professionals are aware that the patient does not perfectly meet the criteria for euthanasia and must be denied; however, they perform euthanasia because they want to relieve the patient from pain (van Tol et al. 2012). Hence, they do not report it because of guilt, and there may be cases where the patient does not explicitly express their wishes. However, the prognosis is so poor that death is not hastened and euthanasia is not considered, or euthanasia is not considered because of the use of unusual sedatives, and no post-mortem report is provided to the ethics committee. These factors specific to health-care providers have led to a critical situation where after-the-fact reporting systems are not used.

Limitations

A major limitation of this study was that it did not include data from before the legalization of euthanasia in the Netherlands and other countries. Furthermore, since the results of this study encompass a wide range of countries and cultures, consideration must be given when applying the results to each culture. For example, in Japan, it has been reported that older cancer patients and their families expect physicians to play a paternalistic role in their care (Tsuboi et al. 2020). Paternalistic medicine is seemingly incompatible with the principle of respect for autonomy, which is an important part of euthanasia. However, in Japan, there are cultural differences regarding informed consent, with "omakase" (leaving decision-making to the physician) practiced and supported (Specker Sullivan 2017). Since this review aims to extract identified problems in the practice of euthanasia, there is undeniably a negative bias toward the liberal application of euthanasia by our failure to include in the text the "positive aspects" of the practice of euthanasia. Although observer bias can occur in the analysis, multiple opportunities for peer review were provided to ensure the validity of the analysis. The coding process, facilitated through 15 discussions with the co-authors, was conducted as one method of ensuring validity in the thematic analysis by maintaining consistency among observers (Boyatzis 1998).

In conclusion, 5 clinical problems were identified in countries where euthanasia has already been legalized. Therefore, countries currently discussing the possibility of legalizing euthanasia should also evaluate these issues in the context of the country's culture to avoid similar problems after its legalization.

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