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Conception of family and friends on euthanasia in intensive care unit in Greece

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Abstract

Background: Euthanasia poses a hot topic of argument in all modern societies. While in several countries the law allows euthanasia under certain conditions, in others, such as Greece, there is no established legal background. This is essentially derived from the conflict on the right to life, which is constitutionally guaranteed. The purpose of this study was to investigate the attitude of relatives or friends of critically ill patients hospitalized in the Intensive Care Unit (ICU) towards euthanasia in a Greek hospital.

Methods: This is a prospective study based on questionnaires completed by relatives and friends of patients hospitalized in the ICU. Relatives/friends of critically ill patients hospitalized in the ICU with APACHE Score ≥ 20 completed a questionnaire consisting of information about their relationship to the patient and another part with psychometric questions on euthanasia. SPSS 19.0 was used for analysis of the data.

Results: One hundred forty-three questionnaires were collected (50.7% female, 33.6% patients' parents). 62.9% of responders considered the quality of life (QOL) of the patient more important compared to the value of life. 48.3% were in favor of euthanasia and 66.4% knew little about euthanasia. 48.3% agreed in institutionalizing euthanasia under certain circumstances. Consensus to discontinue the therapeutic interventions significantly correlated to patient's age and severity of the disease.

Conclusions: In the present study we found that the more the APACHE II score increased the more positive were the participants when asked to give consent or decide to accelerate the end of life of the patient. Overall, the level of knowledge of the relatives of critically ill patients on euthanasia and the currently used law in Greece on euthanasia is poor.

Keywords: Euthanasia, Critically ill patient, Intensive care unit

Background

The problem of euthanasia has been a matter of concern for humanity since antiquity. The importance of the end of life was firstly introduced by Hippocrates, who added "moral practice" of medicine in the oath, condemning the administration of a lethal drug from the physician to his patient, either in order to put an end to his life or to the life of any unborn fetus.

Development of medical science, rapid evolution of medical technology and progress in Intensive Care Unit (ICU) medicine offered the potential to effectively treat diseases, further expand life expectancy, and reduce transmitted diseases. Under these conditions, significant ethical and legal problems have emerged, both in the treatment of many diseases and the dilemma of continuation or withdrawal of treatment intervention.

Euthanasia is defined as "end to life out of mercy", in end-stage disease, or situations due to which life becomes particularly unpleasant or unbearable. The term "euthanasia" comes from ancient Greece when a different meaning was initially proposed. In ancient times, what intrigued the Greeks the most was great and glorious death in order to give to the diseased immortality and fame after death. In the original concept of euthanasia, the word "eu" means good, beautiful, brave, noble, while the second part of the word expresses the natural

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"death". Euthanasia sets an end to life on request and is defined as the process where a doctor intentionally gives an end to the life of a person by the administration of drugs, under the voluntary and competent request of that person, who lacks intent to cure.

Francis Bacon (1561–1626) translated the Greek word euthanasia in English clarifying the meaning as "enhancing death, to put an end to a life full of pain and intolerance." Euthanasia is defined as "the deliberate killing incurable, with his consent or without it, in relief or redemption of the painful agony of unbearable pain existing therapies fail to soothe". In other words, this "death inducing method is done for specific reasons".

Depending on how euthanasia is performed, the term can be further classified based on the subject who takes initiative and the way euthanasia is executed.

Euthanasia has been further investigated in several forms and has been divided according to social issues and values, due to scientific progress or the complexity of the methods used to overcome the legal and ethical responsibilities.

Recently, "early euthanasia of defective neonates", like infants who develop serious health problems, has been widely discussed via highlighting the growing interest of legal science and public opinion. This action is not a form of euthanasia. In fact, proponents of this practice argue that this kind of euthanasia belongs to the concept of abortion, but does not lose the independent character as a form of euthanasia.

A separate type of euthanasia is the field of disconnection of patient from artificial life-sustaining machines. This action is often characterized as a form of passive euthanasia, which is not accurate, as the disconnection of the patient reflects an action. In fact, this form is similar to active euthanasia which is a possibly unfair human action. In order to be accepted as a type of euthanasia, disruption of technical means of life support must fulfill two conditions, pre-existing patient declaration of his/her intent and the progressive aggravation of patient's condition with likely fatal consequences in contrast to previous permanent and steady state.

"Assisted suicide" is considered as another aspect of euthanasia and is actually defined as the action of providing a form of medication with toxic effect on human body aiming to terminate life in its critical end-stage condition. Moreover, the respect to the right in autonomy and self-determination has been a field of controversy. In the literature it has been referred as "Wills Euthanasia", "Living Will", "Advance directives for end of life" and "Biological Wills". Their content is medical advice based on which the patient refuses or accepts in advance specific treatments that will be proposed in the future by the physician. This advice contains further information on the expected course of the disease and gives the potential of selection of a specific person as a representative of the patient in his/her personal health matters in the case patient's ability to judge and take decisions for his/her life becomes impossible in the future.

Conflict on euthanasia definition and aspects is initially derived from the arguments on the right to life, which is internationally protected and widely guaranteed constitutionally. Interestingly, relevant provisions such as the European Convention for the Protection of Human Rights, the European Court of Human Rights and the European Oviedo Convention (1997) on Human Rights and Biomedicine have been extensively occupied with the issues aforementioned.

Dilemmas on euthanasia have gained medical, legal, political, social and economical aspects. In the Netherlands, regulation of euthanasia has been officially established, while in Luxembourg euthanasia was legalized by the parliament in 2008 and the official adoption was announced in 2009 [1]. Australia enacted the "Act on patient rights in the last stage," or more simply the legitimacy of "active, voluntary euthanasia" [2, 3]. The first US state allowing medically assisted suicide, was Oregon by adopting the Law "death with dignity" (Death with Dignity, Act of 1994) but under strict conditions [4]. In 2008, Washington State allowed in similar conditions to those of Oregon, euthanasia. In addition, the state of Montana, allowed euthanasia, after a court decision in December 2008 [5].

Controversial opinion on the establishment of the right to euthanasia in Greece is of particular interest since there is no relevant legislation. The Greek legislation does not contain the term "euthanasia" beyond the term "homicide in consent" which consists of an offense of Criminal Law. Greece has signed the Treaty on Human Rights and Biomedicine in Oviedo, Spain.

The Greek Orthodox Church has a precise position against all forms of euthanasia, claiming the protection of life to the fullest and considering life as a sacred gift from God.

The purpose of this study is to investigate the attitude and adequacy of knowledge of relatives or friends of patients hospitalized in an ICU towards euthanasia and to identify and evaluate possible factors affecting their decisions about possible euthanasia.

Methods

The study was conducted in a tertiary Greek hospital from 01.03.2012 until 28.02.2015. For the present study, we used the definition of passive euthanasia. The individuals included in the study were relatives or friends of patients (aged between 18 and 80 years old) hospitalized in the ICU on mechanical ventilation, for at least ten days without intension for weaning from the ventilator. The severity of patients' condition was estimated using

the APACHE II score and there were only included patients with APACHE II score > 20. In fact, this score is widely used as a scoring system of the severity of the disease specifically among ICU patients. It takes under consideration the age of the patient, the neurological assessment based on the Glasgow Coma Scale and several physiological measurements like vital signs (temperature, mean arterial pressure, heart rate, respiratory rate), blood tests (creatinine, hematocrit, white blood cell count, serum sodium and potassium) and pH of the arterial blood.

All participants were given a questionnaire after being informed about the purpose of the study and that their participation would be voluntary and anonymous. They returned the questionnaire inside a sealed envelope.

The questionnaire consisted of two parts. The first part clarified the demographics of relatives/friends as well as their relationship with the patient. The second part consisted of three psychometric questions that assessed their knowledge on euthanasia and scored a five- point Likert scale from "very few =1 to very much =5". There were seven questions on their attitude towards the possibility of euthanasia of the patient which was scored on a five- point Likert scale characterized as "strongly disagree = 1 to strongly agree = 5", a question that evaluated their current attitude towards the past (YES-NO) and one question with eleven sub-questions that evaluated the factors that would affect their assumingly positive decision in the Likert scale (not at all important = 1 to very important = 5).

The study was independently reviewed and approved by the Ethical Committee of our hospital and it conforms to the provisions of the Declaration of Helsinki in 1995 (as revised in 2002). All participants signed an informed consent in order to be included in the study. Patient anonymity was preserved.

Statistical analysis

The mean values and standard deviations (SD) were used to describe quantitative variables. Absolute (N) and the relative (%) frequencies were used for the description of qualitative variables. For comparison of the ratios we used Pearson's x^2 test or Fisher's exact test where appropriate. To control the type I error due to multiple comparisons, the Bonferroni correction was used where the level of significance was set as 0.05/n (n = number of comparisons). To compare quantitative variables between two groups we used the Student's t-test. For the control of the relationship between two quantitative variables we used the Spearman (r) correlation. The correlation is considered as low when ranges between 0.1 and 0.3, moderate between 0.31 and 0.5 and high when above 0.5. In order to find independent factors associated with the views of participants on euthanasia, logistic regression analysis was used with successive stepwise odds ratio with 95% confidence intervals (95% CI). The interval reliability of the questionnaires was tested using the Cronbach's-α factor. Evaluation of answers to the questionnaire provided required Cronbach's alpha test. The level of significance was set at 0.05. SPSS 19.0 was used for analysis.

Results

The population studied consisted of 143 subjects (50.7% females) with a mean age of 43.1 years (±13.8). Data collection lasted for three years, from 01.03.2012 until 28.02.2015. A total of 579 questionnaires was collected, 143 of which were adequately completed. Therefore, response rate was 24.70%.

In regards of responders' characteristics and their relationship to patients in the ICU, 33.6% (n = 48) of the sample consisted of the parents of the patient hospitalized in the ICU, 18.9% (n = 27) were patient's partner, 18.9% (n = 27) were friends, 16.8 (n = 24) were relatives, 10.5% (n = 15) were colleagues and 1.4% (n = 2) were in another relationship with the patient. The majority of participants (66.4%) lived in a different house from the patient, while among the rest, 77.3% lived in the same village/town. Additionally, 47.6% (n = 68) of participants were married, 30.8% (n = 44) were single and the rest were divorced, widowers or roommates, while 59.9% (n = 85) had children.

The mean APACHE II score of the patients hospitalized in the ICU was 24.9 points (SD =2.2). When associated to the intention of relatives or friends to decide on the possible end of life of the ICU patient, we found that high APACHE score of the patient increased the supportive to euthanasia opinion of the participants. In fact, for patients with APACHE score above 25, participants were positively inclined in regards of euthanasia.

Results of the study revealed that the level of knowledge on euthanasia of relatives/friends is low (66.5% knew a few/very few) and only 11.2% knew much/very much. The main source was the media and press (78.9%). Even more, 46.2% was not informed about the progress of legislation of euthanasia in Greece. More than half of the participants (48.3%) would agree under certain conditions to legalize euthanasia in Greece, while 23.1% of the answers were inconclusive. Furthermore, nearly one in three participants (33.8%) has changed his/her point of view on euthanasia compared to the initial position. In fact, 47.6% of participants would consent or take a decision to accelerate the end of life of the patient under certain conditions.

Table 1 shows the results of the 12-item questionnaire that was given to participants and Table 2 reflects the relationship between the responders' background on euthanasia and their attitude towards euthanasia. Interestingly, a significantly positive correlation between Q1 and Q3 questions was found (p < 0,001, r = 0.36). Herein, the

Table 1 Knowledge and attitude of relatives/friends of patients to euthanasia

		Number	Percent
What do I know about Euthanasia? (Q1)	Very few	34	23,8
	A few	61	42,7
	Some	32	22,4
	Much	14	9,8
	Very Much	2	1,4
Source of knowledge (Q2)	Primary Studies	21	14,8
	Post-graduate studies	4	2,8
	Continous education	5	3,5
	Media	112	78,9
How informed are you about the law regarding euthanasia in Greece? (Q3)	I am not informed	66	46,2
	A Little	53	37,1
	Average knoeledge	20	14,0
	Well informed	3	2,1
	Very informed	1	0,7
Would you agree to stop a treatment applied to your relative/friend, apart from the possibility that this would briefly prolong his/her life, upon his/her request and if this was permitted by law? (Q4)	Totally disagree	30	21,0
	Disagree	39	27,3
	Do not know	36	25,2
	I agree	32	22,4
	Totally agree	6	4,2
Would you agree not to initiate a treatment, although this could briefly prolong his/her life, upon his/her request and if this was permitted by law? (Q5)	Totally disagree	32	22,4
	Disagree	48	33,6
	Do not know	32	22,4
	I agree	25	17,5
	Totally agree	6	4,2
Would you agree in legislation of euthanasia in Greece under certain conditions? (Q6)	Totally disagree	19	13,3
	Disagree	22	15,4
	Do not know	33	23,1
	I agree	59	41,3
	Totally agree	10	7,0
Would you agree to stop a treatment applied to your relative/friend, even if this would briefly prolong his/her life, upon physicians' recommendation and if this was permitted by law? (Q7)	Totally disagree	25	17,5
	Disagree	43	30,1
	Do not know	39	27,3
	I agree	31	21,7
	Totally agree	5	3,5
Would you agree not to start a treatment to your relative/friend, even if this would briefly prolong his/her life, upon physicians' recommendation and if this was permitted by law? (Q8)	Totally disagree	26	18,2
	Disagree	43	30,1
	Do not know	36	25,2
	I agree	34	23,8
	Totally agree	4	2,8
Would you ask the physician to stop a treatment applied to your relative/friend, even if this would briefly prolong his life under certain circumstances? (Q9)	Totally disagree	40	28,0
	Disagree	65	45,5
	Do not know	21	14,7
	I agree	15	10,5
	Totally agree	2	1,4

Table 1 Knowledge and attitude of relatives/friends of patients to euthanasia *(Continued)*

		Number	Percent
Would you ask the physician not to start a treatment to your relative/friend, even if this would briefly prolong his life under certain circumstances? (Q9) (Q10)	Totally disagree	38	26,6
	Disagree	66	46,2
	Do not know	25	17,5
	I agree	12	8,4
	Totally agree	2	1,4
Has your current attitude towards euthanasia changed compared to the initial opinion? (Q11)	Yes	48	33,8
	No	94	66,2
Would you ever agree or would you take a decision to accelerate the end of the life of your relative/friend under certain conditions? (Q12)	Yes	68	47,6
	No	75	52,4

more the relatives/friends were aware about euthanasia in general, the better they knew about legislation in Greece. Even more, there seemed to be a significantly positive correlation between the range of information on the aforementioned law in Greece (Q3) and their supportive opinion in regards of patient's and/or physician's preference on treatment options and decisions, as expressed by questions Q7 (p = 0,016, r = 0,20) and Q8 (p = 0,020, r = 0,19). In addition, awareness of relatives/friends of patients on currently established legislation in Greece was positively associated with their request to the therapeutic team either to discontinue ($p = 0.025$, $r = 0.19$) or to even initially disincline any medical intervention (p = 0,038, $r = 0.17$). Therefore, the more informed they were, the more acquiescent they presented with the idea of euthanasia. Finally there are significant positive correlations between all variables of the questionnaire and the attitude of relatives/friends towards euthanasia (p < 0,001) (Tables 1 and 2).

Furthermore, we investigated the conditions under which participants would consent to a decision to the end of life of their severely ill patient in descending order of importance. The three most important conditions in order to consent or to make such a decision was the confirmation of patient's irreversibly severe status, (MT = 4.6 SD = 0,9), his/her intolerable pain (MT = 4.6, SD = 0.7) and brain death (MT = 4.5, SD = 1). The less important conditions were the active participation of the staff (MT = 3.3, SD = 1.5) and the persistence of family members (MT = 2.6, SD = 1.3).

Discussion

Technological advances in the field of medicine and demographic changes have led to a more complicated

Table 2 Correlation of knowledge and attitude of relatives/friends to euthanasia

		Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Q1.	r	0,36	−0,02	−0,09	0,07	0,03	0,08	-0,05	-0,08
	P	<0,001	0,782	0,290	0,407	0,744	0,323	0,533	0,316
Q3.	r	1,00	0,16	0,10	0,15	0,20	0,19	0,19	0,17
	P	.	0,053	0,245	0,083	0,016	0,020	0,025	0,038
Q4.	r		1,00	0,90	0,63	0,61	0,54	0,66	0,66
	P		.	<0,001	<0,001	<0,001	<0,001	<0,001	<0,001
Q5.	r			1,00	0,57	0,67	0,58	0,67	0,64
	P			.	<0,001	<0,001	<0,001	<0,001	<0,001
Q6.	r				1,00	0,49	0,47	0,49	0,51
	P				.	<0,001	<0,001	<0,001	<0,001
Q7.	r					1,00	0,87	0,60	0,58
	P					.	<0,001	<0,001	<0,001
Q8.	r						1,00	0,61	0,57
	P						.	<0,001	<0,001
Q9.	r							1,00	0,92
	P							.	<0,001

perception of person's, family and health professionals towards euthanasia. Moreover, the attitude towards death is followed by great discrepancy as an increasing number of individuals might control the way, time and place of their death in the future [6, 7].

According to this study, the level of knowledge of the relatives of critically ill patients on euthanasia and the currently used law in Greece on the end of life is not particularly high, since only 19.2% knew very much/ much on euthanasia. For most of the participants their main source of information was the media and press (78.9%), while the knowledge they gained from their basic education was not sufficient (14.8%) and was even less during the continuing education and postgraduate studies (6.5%). This demonstrates the need for the enrichment of basic education programs on issues related to ethical dilemmas. The results of our study are confirmed by those of other studies which found that both education and public debate on euthanasia and the patient's own decision on death upon request when in an incurable state, led to a positive attitude towards the self management of the end of life [8–10].

In regards of the possibility to take initiative for the final decision on treatment approaches or will to death of their relative/friend, 73% of responders disagreed/ completely disagreed. A multicenter study conducted in 47 European countries on the public point of view on euthanasia, showed that Greece belongs to those countries whose statement on euthanasia is relatively poorer and is affected by the limited and restricted legislation on euthanasia in Greece [10]. The same results were published by the studies of Rietjenset et al. and Kemmelmeie et al. who discussed on perception of people of a "good death", with the acceptance of the pro-euthanasia agreement of "death with dignity" [11, 12].

Reliability of health systems for individuals is another matter. In a study of Köneke, acceptance of euthanasia by Greeks was found to be poor [13]. Therefore, in this study, relatives/friends would not take responsibility for the possible end of the life of their family or friend even after prompt information provided by health professionals. Relatives are not always willing to make decisions on behalf of the patient in such important matters. In a French study of patients hospitalized in the ICU, the researchers found that 53% of relatives did not want to participate in the decision-making [14].

Another possible explanation for our results could be the expectation that comes from advanced technology in the ICU enhancing hope of relatives/friends for patient's life expectancy. Technology can significantly prolong the patient's life, but can also increase psychological intensity of patients and their relatives when they have to make important decisions concerning the interruption or non-initiation of treatment for their patients [15].

In the present study we found that the more the APACHE II score increased the more positive were the participants when asked to give consent or decide to accelerate the end of life of the patient. Other important factors that would influence them were status severity, sense of pain and brain death. A number of international observational studies have come to the same clinical factors that contribute to non-escalation or withdrawal of treatment [16–20].

An important limitation of the study is that the population included came from a single hospital and a single ICU. Furthermore, response rate was not very high. The limited participation indicates that the Greek population is not yet ready to get involved in such discussions relating to major ethical dilemmas such as decisions about end of life.

Conclusions

The issue of euthanasia poses a challenge to every society. Publication and open discussion of euthanasia may have the potential to further permit the adoption of supportive attitude on euthanasia matters. Contribution of media and press has a major role in the issue. The decision on the management of the possible end of life is very important and often implicates patient's family. At this point, participation of the staff of the ICU may enlighten family and friends after providing professional advice and information.

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Availability of data and materials

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

Authors' contributions

TT designed the manuscript and wrote the report. NG contributed in design of the study and review of the article, while EP contributed in collecting and analyzing the data. MD and SK participated in the interpretation of the data and carried out the statistical analysis. SS conceived the study. GZ and DT contributed in making the decision to submit for publication. All authors read and approved the final manuscript.

Ethics approval and consent to participate

Ethics approval by the Ethical Committee of Hippocration General Hospital of Athens in Greece, with the reference number 18531.

Consent for publication

Participants signed an informed consent in order to be included in the study.

Competing interests

All authors declare that they have no competing interests.

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