

Knowledge concerning organ transplantation among inhabitants of the Kielce Region

Wiedza mieszkańców województwa świętokrzyskiego na temat transplantologii

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Słowa kluczowe: transplantologia, przeszczepianie narządów, wiedza, województwo świętokrzyskie.

Abstract

Introduction: Transplantations often save human health and life, and simultaneously evoke many medical and philosophical controversies.

Aim of the research: An attempt to evaluate knowledge about organ transplantation among inhabitants of the Kielce Region, and to determine factors that affect the level of this knowledge, as well as the use of the information obtained in the promotion of organ transplantation in the region.

Material and methods: The study was conducted during the period July–October 2010 and covered a group of 150 inhabitants of the Kielce Region: 96 females and 54 males, who were employees of various institutions. All of them were asked to complete an anonymous questionnaire. The results of the survey were statistically analysed (descriptive statistics). The method of a diagnostic survey was used, with the questionnaire technique. A questionnaire form was selected as a research instrument.

Results: Based on the results of the study, it may be presumed that awareness of the problem of organ transplantation among the inhabitants of the Kielce Region is at a good level, and the majority of them show a positive attitude towards the transplantation of organs.

Conclusions: In Kielce, since the promotional campaign ‘Transplantation is a second life’, the number of organ donations has increased. A variety of actions have been undertaken by associations and foundations engaged in the promotion of organ transplantation to expand and update knowledge of this problem in society.

Streszczenie

Wprowadzenie: Transplantacje niejednokrotnie ratują zdrowie i życie ludzkie, równocześnie budzą wiele kontrowersji medycznych i filozoficznych.

Cel pracy: Próba oceny wiedzy mieszkańców województwa świętokrzyskiego na temat transplantologii oraz określenia czynników wpływających na poziom tej wiedzy, a także zastosowania uzyskanych informacji w promocji transplantologii w naszym regionie.

Material i metody: Badania przeprowadzono od lipca do października 2010 r. Objęto nimi 150 osób, w tym 96 kobiet i 54 mężczyzn. Wszyscy byli mieszkańcami województwa świętokrzyskiego, zatrudnionymi w różnych zakładach pracy. Osoby te poproszono o wypełnienie anonimowej ankiety. Wyniki badań opracowano statystycznie (statystyka opisowa). Wykorzystano metodę sondażu diagnostycznego, a jako technikę zastosowano ankietę. Jako narzędzie badawcze wybrano kwestionariusz ankiety.

Wyniki: Świadomość mieszkańców województwa świętokrzyskiego wobec problemu transplantologii jest na dobrym poziomie i w większości mają oni pozytywny stosunek do przeszczepiania narządów.

Wnioski: W Kielcach po kampanii promocyjnej „Przeszczep to drugie życie” wzrosła liczba pobrań narządów. Różnorodność działań stowarzyszeń i fundacji zaangażowanych w propagowanie transplantologii pogłębia i uaktualnia wiedzę społeczeństwa na ten temat.

Introduction

Organ transplantation began more than 50 years ago. In Poland, the programme of organ transplantations developed very slowly and with tremendous effort from those engaged in it. It was necessary to create legal regulations, change public opinion and the opinion of medical circles, and obtain support from the Church, as well as funds for this goal [1–3].

A clear acceleration was observed after the implementation in 1996 of the Act in the Matter of Removal and Transplantation of Cells, Tissues, and Organs [4].

Transplantation of organs is a method of treatment that is very sensitive in terms of social perception. It differs from other therapeutic methods in the fact that an organ is needed, which can neither be manufactured nor bought; an organ must be received from someone else. Thus, it is worth considering the legal and moral aspects of this problem, and it is important to provide an answer to the question: What is the level of awareness of the problem of organ transplantation among the inhabitants of the Kielce Region? It is a paradox that the majority of people accept the reception of transplants in cases of disease, whereas considerably fewer people consciously express their consent to use their own organs, or the organs of their significant others after death [3, 5].

Transplantation medicine occupies an important position in the system of health care. Organ transplantations are needed by those who are ill, and constitutes the only way to save many patients with heart, liver, lung, or kidney failure from death. However, the knowledge, skills, and devotion of medical professionals is not enough to save the lives of those for whom transplantation is the only chance. Good will, awareness, and support on the part of society are also indispensable. Within educational programmes, society should be informed about problems with which Polish transplantology struggles. It is also important to publicise the attitude of the Church towards the donation and transplantation of organs.

The idea of transplantation of human organs has a long history that dates back to ancient times. In the tradition of Christian Europe, the holy brothers Saint Cosmas (Kuzma) and Saint Damian – physicians from Sicily, living and acting in the territory of Syria in the 3rd century – are usually quoted.

The oldest records of attempts to transplant organs is associated with medicine in ancient India. Probably in India, the technique of reverse transplantation of the skin flap from the forehead was applied for the reconstruction of the nose as early as in those ancient times. It was not until the 15th century that Branca, a physician from Sicily, successfully applied cheek flap grafts for the reconstruction of the nose (1442). In 1869, a Swiss surgeon, Jacques Reverdin in Geneva – and probably a little later but independently, the French physician

Felix Guyon in Paris – applied skin transplants in cases of wounds that were not healing well.

The beginning of the 20th century brought experiences and discoveries that had an important effect on the further history of transplanting living vascularised organs, and thus on modern transplantology. In 1902, Emerich Ullman, a Hungarian physician from Vienna, transplanted a dog's kidney to the neck by joining its blood vessels to the vessels of the neck. For several days, the transplanted kidney successfully secreted urine. In the same year, Alexis Carrel, a French biologist and surgeon living in the USA, published his experiences concerning a new technique of suturing blood vessels. He is the actual creator of organ transplantation and a world pioneer in this area. In 1905, Carrel together with Charles Claude Guthrie proved that an animal's own kidney can be transplanted to another site and may function for a long time, but when transplanted to another animal it quickly dies [6].

In Poland, on 26 January 1966, Jan Nielubowicz carried out the first renal transplantation, and in 1968, Wiktor Bross in Wrocław performed the transplantation of the kidney donated by a relative. On 4 January 1969, Jan W. Moll in Łódź, for the first time in Poland, transplanted a heart; however, the transplantation was unsuccessful [7].

It was not before 5 November 1985, when Zbigniew Religa, in Zabrze, carried out the first successful heart transplantation. In 1988, in Warsaw, a successful transplantation of the kidney and a pancreas segment was performed, and several months later, the transplantation of the kidney and whole pancreas with a segment of duodenum. In 1990, in the Children's Memorial Health Institute in Warsaw, Doctor Kaliciński performed six successful transplantations of the liver in children, and in 1999, at the same Institute, the first family transplantation of a liver was performed, together with a French team [7, 8].

In 1998, the team of Zbigniew Religa transplanted a heart in a child aged nearly 3 years (at that time the youngest child in Poland to undergo this surgery) [6].

In 2002, Marian Zembala and his team, in Zabrze, carried out a successful transplantation of the heart and lungs, and, in the same year, a simultaneous transplantation of the heart and kidney, and in 2003 – a successful transplantation of the lungs [7].

The Act in the Matter of Removal and Transplantation of Cells, Tissues, and Organs of 26 October 1995 (Journal of Laws of 1995, No. 138, Clause 682), which came into effect on 6 March 1996, is considered an important milestone on the road to unification of the law [4]. In West European countries, the problem of legal regulation of transplants had already been undertaken after World War II. A milestone in the process of legal regulation of transplants was the adoption by the Council of Europe Committee of Ministers on 11 May 1978 of a resolution on the harmonisation of

legislations of member states relating to the removal, grafting, and transplantation of human tissues and organs, patients' rights, and moral problems.

In Poland, clinical transplantology has developed in the midst of a relatively complicated legal situation. Until 1991, organs from deceased persons could only be removed based on the regulation by the President of the Republic of Poland of 1928, with amendments in 1949 [9]. The subsequent step was the passing, in 1978 by the Minister of Health and Social Welfare, of guidelines regulating the conditions for allowing the procurement of kidneys, both from living and deceased donors. The Code of Medical Ethics, also adopted in 1991, supplemented only to a small extent the legal regulations concerning the removal of organs after death [10–12]. Such a legal status caused many ambiguities and was often the source of numerous situations of conflict. In order to exclude doubts, and primarily on behalf of responsibly securing the interests of both donors and recipients, an Act was adopted on 26 October 1995 regulating the matters of removal and transplantation of cells, tissues, and organs from both deceased and living persons. However, this Act still contained many legal imperfections; therefore, on 1 July 2005, a new Act was adopted which has remained in effect to this day, concerning the removal, storage, and transplantation of cells, tissues, and organs, further known as the Transplantation Act [13]. This replaced the Act in the Matter of Removal and Transplantation of Cells, Tissues, and Organs of 26 October 1995. The present Act, in its content, follows up the previous Act, but constitutes an expanded version that takes into consideration a number of important legal solutions postulated to date in the doctrine [13–15].

Aim of the research

The objective of the study was an attempt to evaluate the extent of knowledge of the inhabitants of the Kielce Region about organ transplantation, and to determine factors affecting the level of this knowledge, as well as the use of the information obtained in the promotion of transplantology in this region.

Material and methods

Until 2007, the Kielce Region was a 'blank spot' on the map of Poland in relation to the procurement of organs for transplantation. Due to the present study it will be possible to provide a reply to the question of whether the training of physician-coordinators, as well as promotion of organ transplantation by means of a social campaign 'Transplantation is the second life', resulted in an increase in the awareness of the inhabitants of the Kielce region of the problems of transplantology.

The main research problem was posed as follows: What is the level of knowledge concerning transplantology among the inhabitants of the Kielce Region?

From the main research problem there resulted the following detailed problems:

- 1) To what extent do age, place of residence, and education level affect the respondents' attitude towards the problem of organ transplantation?
- 2) What is the respondents' knowledge concerning reservations of families about transplantology, with respect to the procurement of organs for transplantation from a deceased person?
- 3) What are respondents' opinions with relation to the effectiveness of transplantation as a method of treatment, and do they accept the removal of organs for transplantation from a healthy person?

In the study the following main hypothesis was formulated: The level of knowledge concerning transplantology among the inhabitants of the Kielce Region is high, which exerts a considerable effect on their attitude towards being a donor, and acceptance of transplantology as an effective method of treatment.

From the above-mentioned main hypothesis there resulted the following detailed hypotheses:

- 1) Age, education level, and place of residence exert an effect on the level of respondents' knowledge.
- 2) It should be presumed that the respondents' knowledge concerning transplantology varies.
- 3) It should be presumed that the respondents have no reservations with respect to the procurement of organs for transplantation from a deceased person.
- 4) In respondents' opinions, transplantation is an effective method of treatment.
- 5) The respondents accept the removal of organs from a healthy person in order to transplant them.

The study was conducted using, with the author's consent, the questionnaire by Lesiak, which consists of two open and closed questions [16].

The study was conducted during the period from July to October 2010, and covered 150 people: 96 females and 54 males. They were all inhabitants of the Kielce region employed in various institutions. The respondents were asked to complete an anonymous questionnaire.

The criteria of qualification into the study group were as follows: age 18–50 years; place of residence (Kielce region); healthy individuals, without potential diseases excluding them as candidate donors.

The criteria of exclusion from the study were as follows: ill individuals; age under 18; age over 50; employees of health services.

In statistical analysis, the method of descriptive statistics was applied. The results of studies were presented as numbers and percentages.

The study was conducted by the method of a diagnostic survey. A questionnaire was used in order to examine the level of knowledge concerning transplantology.

Results

The study covered 150 respondents: 96 females and 54 males. They were all inhabitants of the Kielce region and were employed in various institutions. The respondents were analysed according to their age and gender. Table 1 presents the data.

The results of the analysis showed that the majority of the respondents were females (64%). Among the females the largest age group was 31–40 years (41 women), which constitutes 28% of the total population in the study. The remaining females were aged 18–30 years (26 women) – 17% of the respondents, and 41–50 years (29 women) – 19% of the respondents. With respect to males, the largest group were those aged 41–50 years (23 men) – 15% of respondents, and a slightly smaller group were males aged 31–40 years (19 men) – 13% of respondents.

The respondents were analysed according to place of residence (Table 2). The majority of respondents lived in urban areas (74%), both females and males. The respondents were also analysed regarding their education level (Table 3).

In the group of women examined, the highest percentage were those possessing university education (36%), followed by secondary-school education

(25%). Among males, the percentages of those who had university and secondary school education level were almost equal.

During the study, the level of knowledge concerning transplantology among the inhabitants of the Kielce Region was comprehensively analysed. As many as 79 respondents, 53% of the total, evaluated their knowledge as very good, 46 reported that their knowledge in the area of transplantology was good (31%), while the answer ‘insufficient’ was indicated by 25 respondents (16%).

A total of 129 respondents (86%) emphasised that they knew the Act that regulates the transplantation of organs, while 3 respondents replied that they were not familiar with this Act (approximately 2%), and 18 were unaware of the existence of the Act (approximately 12%).

The majority of the respondents considered transplantology as an effective method of treatment (92%). However, 4% indicated that this is not an effective method, while the remaining 4% of respondents had no knowledge concerning this problem.

From all of the people in the survey, 93% (139) did not know the name of the agency to which a possible objection to be a donor should be reported. A correct

Table 1. Respondents by age and gender

Age intervals [years]	Females		Males	
	<i>n</i>	%	<i>n</i>	%
18–30	26	17	12	8
31–40	41	28	19	13
41–50	29	19	23	15
Over 50	0	0	0	0
Total	96	64	54	36

Table 2. Respondents place of residence

Place of residence	Females		Males	
	<i>n</i>	%	<i>n</i>	%
Urban	69	46	42	28
Rural	27	18	12	8
Total	96	64	54	36

Table 3. Respondents' education level

Education level	Females		Males	
	<i>n</i>	%	<i>n</i>	%
University	54	36	26	17
Secondary school	38	25	22	15
Elementary	2	1.4	4	2.8
Other	2	1.4	2	1.4
Total	96	63.8	54	36.2

answer was provided by only two respondents (1.3%). Incorrect answers were given by nine respondents (5.7%).

From among all of the people in the study, 118 (81%) knew the definition of constructive assent, while 32 respondents provided an incorrect answer (19%).

As many as 111 (74%) respondents admitted that they knew of foundations dealing with transplantology, whereas three respondents did not know any foundation engaged in the problem of transplantology (2%), and 36 (24%) provided the answer 'I do not know'.

The problem of transplantology was encountered for the first time in the private life of 22 respondents (17%), while 94 reported the media (71%), and 16 (12%) mentioned other sources of information, as the place of first contact with this problem.

Analysis of the results of the study allowed us to determine the readiness of the inhabitants of the Kielce Region to be a donor of paired-organs in their lifetime. The wish to donate a paired-organ was declared by 39 people in the study (26%). However, as many as 61 declared such a wish, but only for a significant person (41%), while 14 (9%) did not express their consent, and 36 respondents did not know if they were ready for such a donation (24%).

As many as 102 (68%) respondents were ready to donate their organs after death, while 10 (7%) did not express their consent, and 38 did not know yet (25%). However, it is noteworthy that despite such a high readiness to be an organ donor after death, only one person completed the declaration of intent.

The majority of the respondents (149 persons, i.e. 99%) did not complete the declaration of content. One person completed such a declaration, even though no one expressed opposition to being a donor.

The promotion campaign had an effect on the decision concerning the possible donation of organs for transplantation – 119 of the respondents provided a positive answer (79%), 28 (19%) reported personal reasons, and 3 did not express consent.

Sixty-seven (45%) respondents evaluated the level of their knowledge as good, and 54 (36 %) as sufficient. However, it should be noted that 29 (19%) respondents considered that the level of their knowledge was insufficient.

Among the proposed methods resulting in the procurement of a larger number of organs for transplantation, in the first place the respondents mentioned greater confidence in medical staff (71 respondents, i.e. 47 %), followed by frequent radio programmes (52 respondents – 35%), and support from the Church (23 respondents – 15%). Other methods were mentioned by 4 respondents (3%).

Familiarity with actions promoting organ transplantation in the Kielce Region was declared by the

majority of people in the study (126, i.e. 84%), 14 (9%) possessed little information concerning this problem, and 10 (7%) did not know of any actions promoting transplantology in the region.

Considering the assessment of promotion of organ transplantations by the inhabitants of the Kielce region, the majority of them expressed the opinion that it is well promoted (126 respondents, which constitutes over 80%); while 4 respondents (5%) had no opinion concerning this problem, and 10 (3%) considered that it is not well promoted.

More than a half of the respondents (82–55%) were aware that one person may be a donor for many people. The remaining respondents had no such knowledge (19%) or did not know (39, i.e. 25%).

As many as 98 respondents knew the attitude of the Catholic Church towards the problem of organ transplantations, which constitutes more than 65% of the population in the study, while 19 respondents did not know the guidelines of the Catholic Church concerning transplantology (13%), and 33 respondents were not interested in the problem (22%).

Discussion

Transplantology is a dynamically developing medical specialty; however, the problem of a shortage or complete lack of donors still remains one of its major problems [3, 6, 7].

Analysis of the results of the study showed that more than half of the inhabitants of the Kielce Region evaluated the level of their knowledge concerning transplantology as very good (53%), and 31% – as good. Nevertheless, 16% of respondents described their state of knowledge as insufficient.

The majority of respondents knew or had heard about the Act regulating organ transplantation in Poland (86%). With respect to the evaluation of transplantology as an effective method of treatment, nearly 81% of respondents considered this method as positive. These results instil optimism because comprehensive knowledge concerning organ transplantations would allow the avoidance of many misunderstandings, as well as overcoming many myths that persist around this problem [17, 18].

Nevertheless, as many as 93% of respondents could not provide an answer to the question concerning the authority to which opposition to being a donor may be reported. Only two respondents correctly answered this question, while nine respondents provided an incorrect answer. It is thought-provoking whether the lack of knowledge of this problem results from a reluctance to be a donor, and knowledge of this authority seems to be unnecessary for the people in the survey, while at the same time as many as 81% of respondents declared that they were familiar with the definition of 'constructive assent'.

Seventy-four percent of the inhabitants of the Kielce region participating in the survey reported that they were familiar with foundations supporting and dealing with transplantology, and 71% of them admitted that the media was the place of their first contact with the problem. These results curtail speculations concerning the need for, and sense of, existence of non-government institutions and foundations dealing with the promotion of organ transplantation, and confirm that these organisations play an important role in the promotion of organ transplantation.

These results also confirm the major role played by the media in the popularisation of knowledge and their importance in the promotion of organ transplantations. More than 68% of respondents reported that they were ready to become donors after death; however, the declaration of constructive assent was completed only by one person, while no one raised an objection. As many as 93% of respondents did not complete such a declaration. This is evidence that although the respondents willingly expressed their verbal consent to be a donor, they did not confirm this in writing. One should agree with Professor Rowiński, who states that this results from the fear of definitely declaring oneself and undertaking commitments. We provide this type of declaration unwillingly [5].

With respect to the readiness of the inhabitants of the region to donate paired-organ during their lifetime, only 26% of respondents declared such willingness. However, 41% of respondents were ready to donate their paired-organ during their lifetime, but only to a significant person, and 24% of them were not able to evaluate if they were ready to donate an organ. This confirms that the inhabitants of the region prefer family transplants, which is entirely understandable. It is easier to donate an organ to someone with whom we have an emotional relationship [9].

It is a controversial fact that 24% of the respondents did not express their consent. Is the reason for this situation the necessity to donate an organ during their lifetime, and thus to undergo the entire surgical-therapeutic process related with the removal and transplantation of the organ, so fear for oneself? Or it is easier to make a decision to be a donor after death, when we no longer feel anything, and basically we do not care? [5].

According to the reports by 79% of the inhabitants of the Kielce Region, the decision about donating organs for transplantation, to a great extent, was influenced by various promotional campaigns. It can be clearly seen just how great is the influence of promotion on the conscious donation of organs in this region.

Concerning the questions about the methods of increasing the number of transplanted organs, 48% of respondents considered that it is necessary to increase the confidence of society in the medical staff,

whereas 35% mentioned that frequent radio and television programmes might result in a larger number of transplantations in Poland. Active support of the problem by the Church was indicated by 12% of respondents. Here, the problem of 'negative promotion' of transplantology in Poland was made apparent, which was the arrest of a known and valued transplantologist. This resulted in a considerable decrease in the number of organ transplantations and a great loss of confidence of society in medical circles. Many experts dealing with transplantology agree with this statement [12].

More than 80% of respondents were of the opinion that transplantology in Poland is well promoted; more than 55% of them were aware that one donor may save many people, and 25% provided the answer 'I do not know'. With respect to the attitude of the Catholic Church to organ transplantation, 65% of respondents knew the recommendations of the Catholic Church concerning this problem, and 22% were not interested. Based on the analysis of the results of the study, it may be presumed that the awareness of the inhabitants of the Kielce region about the problem of transplantology is on a good level, and the majority of them show a positive attitude towards organ transplantations. This has a considerable effect on their attitude towards being a donor, as well as their acceptance of transplantology as an effective method of treatment. This confirms the main hypothesis of this study.

The majority of the detailed study hypotheses are also confirmed: Age, education level, and place of residence affect the respondents' awareness. Urban inhabitants more willingly declare the wish to be a donor than people living in the rural environment. Younger people more willingly declare readiness to be a donor, and the level of knowledge concerning transplantology increases with education level. The hypothesis was also confirmed that the respondents' knowledge about transplantology varies. Some issues concerning this problem require the supplementation of knowledge (among others, the name of the authority to which opposition to being a donor may be reported). The respondents had no reservations with respect to the removal of organs for transplantation from a deceased person. They fully accepted transplantation and considered it to be an effective method of treatment. The respondents accepted the procurement of organs for transplantation from a healthy person; however, they more frequently declared such readiness with respect to a family member. In the studies of the social opinion we all declare our acceptance of transplantology medicine. This is possible evidence of our sensitivity, as well as the wish to leave a part of us after death, the possibility to be just a little immortal [3, 9, 12, 19, 20].

Transplantology is a problem that is in fashion, often dealt with in the media and television, and also

in the family circle. Due to the campaigns promoting transplantology in Poland, transplantology is once again perceived in positive terms, even in the aftermath of the scandal involving the known and valued transplantologist. Society has heard and understood the serious problem of lack of donors. Any actions promoting transplantology in Poland meet with a good response on the part of society, which needs reliable information concerning the problem. A large number of myths have grown around this problem; therefore, there is the need for a greater engagement of the Church and medical circles. In Kielce, after the campaign 'Transplantation is a second life', the number of donated organs increased. Various activities by associations and foundations engaged in the promotion of transplantology expand and update knowledge of the problem in society.

Everything should be done in order that the following message reaches each individual: the body can be a valuable source of life in the case of sudden death.

Conclusions

The education of society concerning the problem of transplantology is a particular action leading to an increase in the number of people who wish to become organ donors. The most effective method of promoting transplantology is the dissemination of knowledge about this method in the media. Greater engagement of the Church is needed in the shaping of social awareness and attitudes of the inhabitants of the Kielce region. It is also necessary to undertake actions aimed at increasing social confidence in medical circles. The imparting of information concerning the problem of transplantology in Poland exerts a positive effect on the number of organs donated for transplant.

References

1. Rowiński W, Wałaszewski J. Dawcy rodzinni... czy obcy? [Polish]. *Służba Zdrowia* 1994; 43-44: 14.
2. Wałaszewski J, Rowiński W. Przeszczepianie narządów [Polish]. *Przegląd Piśmiennictwa Chirurgicznego* 2000; 8: 289-90.
3. Rowiński W, Wałaszewski J. Bariery i szanse rozwoju przeszczepiania narządów w Polsce [Polish]. *Służba Zdrowia* 1994; 45-46: 9.
4. Ustawa z dnia 26 października 1995 roku o pobieraniu i przeszczepianiu komórek, tkanek i narządów [Polish]. *Dz. U.* 1995; Nr 138: 682.
5. Jaroszek J. Przeszczepy w świetle prawa w Polsce [Polish]. *Wydawnictwo Prawnicze, Warszawa* 1998: 84.
6. Czerwiński J, Antoszkiewicz K, Pliszczyński J. Pobieranie i przeszczepianie narządów w Polsce w 2002 roku [Polish]. *Poltransplant. Biuletyn Informacyjny* 2003; 1: 3-12.
7. Czerwiński J. Koordynator transplantacyjny [Polish]. *Gazeta Prawna Dodatek* 2008; 1: 7-9.
8. Rowiński W, Wałaszewski J, Safjan D. Problemy etyczno-obyczajowe przeszczepiania narządów [Polish]. *Służba Zdrowia* 2002; 75: 42-64.
9. Nowacka M. Etyka a transplantacje [Polish]. PWN, Warszawa 2003.
10. Duda J. Transplantacja w prawie polskim. Aspekty cywilnoprawne [Polish]. *Kantor Wydawniczy Zakamycze, Kraków* 2004.
11. Duda J. Polskie ustawodawstwo transplantacyjne. Zbiór przepisów [Polish]. *Kantor Wydawniczy Zakamycze, Kraków* 1999.
12. Zielińska E. Transplantacja w świetle prawa w Polsce i na świecie [Polish]. *Państwo i Prawo* 1995; 6: 15-34.
13. Ustawa z dnia 1 lipca 2005 r. o pobieraniu, przechowywaniu i przeszczepianiu komórek, tkanek i narządów. *Dz. U.* 2005; nr 169; poz. 1411.
14. Rozporządzenie Ministra Zdrowia i Opieki Społecznej z dnia 1 października 1996 r. w sprawie Centralnego Rejestru Zgłoszonych Sprzeciwów na pobranie komórek, tkanek i narządów, sposobu rejestracji sprzeciwów oraz sposobu ustalania istnienia sprzeciwu w formie oświadczeń [Polish]. *Dziennik Ustaw* nr 124; poz. 588.
15. Ustawa o zmianie ustawy o pobieraniu, przechowywaniu i przeszczepianiu komórek, tkanek i narządów oraz o zmianie ustawy. Przepisy wprowadzające [Polish]. *Kodeks karny z dnia 17 lipca 2009; Dz. U.* 2009; nr 141; poz. 1149.
16. Lesiak A. Postawy studentów pielęgniarstwa wobec problemu transplantologii [Polish]. *Praca magisterska UJK Wydział Nauk o Zdrowiu, Kielce* 2005.
17. Wolf P, Boudjema K, Ellero B, et al. Transplantacja narządów [Polish]. *Żak, Wrocław* 1993.
18. Wojtasiński Z (współpr. A. Baranowska, M. Mrozińska). Ile za nerkę? Czas na wolny handel organami do przeszczepów [Polish]. *Wprost* 2002; 46: 79.
19. Głuszek S, Rębak D, Kozieł D. Wybrane problemy bioetyczne w chirurgii [Polish]. *Studia Medyczne* 2010; 20: 7-11.
20. Wojciechowski P, Szpringer M. Bariery społeczne w transplantologii w opinii młodych Polaków [Polish]. *Studia Medyczne* 2012; 27: 45-52.

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