

**UNIDAD EDUCATIVA PARTICULAR JAVIER**

**BACHILLERATO EN CIENCIAS**

**MONOGRAPH**

**“THE LAW OF ORGAN DONATIONS IN ECUADOR AND IT’S IMPACT IN THE  
SOCIETY OF 21 ST CENTURY”**

**STUDENT:**

**EMILY LEÓN QUINTO**

**ADVISOR: LCDO. MAURO MACKAY**

**ADVISOR: LCDA. PATRICIA SANCHEZ**

**THIRD OF BACCALAUREATE - COURSE D**

**2019 – 2020**

### **Gratitude**

I thank God, my family, friends and advisors for having supported me in the choice of my topic and to develop it with better ethics because it helps me correct my mistakes and learn to improve them and gives me a lot of help for the future in aspects of the university as the presentation of my thesis either my career or master.

### **Summary**

This monographic work will describe and explain the situations and problems in the social, political and medical field of people who are donors and recipients of some donation of organs in Ecuador and the 21st century because at this time is where there have been more innovative changes through medicine with respect to bacterial diseases and lifestyle, the technology with respect to scientific methods by which a donation must be insured and there are no risks of complications in the process and laws with respect to the articles that have been imposed in the country, which since 2011 have caused great impact and hope for Ecuadorians who probably years ago have died waiting for a donation.

The importance of this monograph breaks down a subject that is currently known very little about it and especially in Ecuador in the sectors of extreme poverty people are very little informed about the organs and their donation processes and that in this time has taken more relevance in medicine as it is an extensive process and much experimental cares, increasingly continue to increase the organs that can be donated.

In the process of a donation, two types of fundamental situations are inferred: the waiting list, which is the place where people who need a donation are registered, and their personal information regarding their genetics. At the same time, the civil registry is in charge of choosing the indicated recipient according to their severity and family, and the trafficking of organs that corresponds to the sale of organs illegally, and this situation delays or makes it impossible for donations to be given more efficiently and minimizes the possibility of accessing a life

opportunity to people who need it, In addition, they can cause very serious harm to children and adolescents and in many cases can kill them.

## Index

Gratitude.....	ii
Summary.....	iii
Index.....	iv
Introduction.....	1
<b>Charpter I.....</b>	<b>2</b>
<b>1.1Definition of organ donation.....</b>	<b>3</b>
1.1.1 Types of donors.....	3
<i>1.1.1.1 Living donor.....</i>	<i>3</i>
<i>1.1.1.2 Deceased donor.....</i>	<i>4</i>
1.2 Impact.....	5
1.2.1 Social.....	5
1.2.2 Political.....	6
<b>Charpter II.....</b>	<b>7</b>
<b>2.1 Waiting list.....</b>	<b>7</b>

<b>2.1.1 Medical aspects.....</b>	<b>7</b>
2.1.2 Social aspects.....	8
<b>2.2 Organ traffic.....</b>	<b>9</b>
2.2.1 Causes.....	9
2.2.2 Consequences.....	10
<b>Chapter III.....</b>	<b>10</b>
<b>3.1 Life with transplanted organs.....</b>	<b>11</b>
3.1.1 Infections.....	11
3.1.2 Lifestyle.....	12
3.2 Transplanted organ rejection reactions in the person.....	13
3.2.1 Causes and consequences.....	13
Conclusions.....	15
Recommendations.....	17
References.....	18

## Introduction

This monographic work is a research on *the law of organ donations in Ecuador and it's impact in the society of 21st century*. Its purpose is not only to inform about the process for organ donation but also to analyze its impact on the positive and negative environment in society, as well as to cultivate Ecuadorian citizens about the importance of organ donation and thus convince them to become donors in the future. Since 2011 the organic law of organ, tissue and cell donations was imposed in Ecuador and since then has caused much hope for a new life opportunity for them and their families and advances for Ecuadorian citizens.

The study of this topic has an enormous relevance not only for Ecuador and its progress in the political, scientific or medical and social fields in the country but also for citizens because it promotes their welfare and health in society by avoiding many unnecessary and painful deaths of children and adults, in addition to providing security with rights over their bodies and needs with respect to a specific donation, citizens have been the main actors when demanding their priorities and that has helped to fulfill and improve donations with solidarity within the country.

Several have been the authors as specific doctors and institutions that have dealt with this issue, for example, the book was the constitution of Ecuador specifically "The law of organ donation of organs, tissues and cells" and "In memory of our donors. These books have contributed much to the process of this monograph and thus obtain more concrete and true information.

The existence of the organic law of donation of organs, tissues, and cells 9 years ago in the course of the year Ecuador 92% of the citizens contributed with the donation of organs since in



2012 in their renewal or application for identity card wanted to be part of the donations voluntarily and this was thanks to the National Institute of Donation and Transplants (INDOT).

The monograph consists of three chapters: the first will deal with the law of organ donations, types of donations, living and dead donors including their social, political and medical fields; the second will deal with the waiting list and its different aspects, organ trafficking and its causes and consequences; the third will deal with living with a donated organ, infections that can occur in the recipient after a donation, lifestyle of a recipient or donor, the rejection of the donated organ in the recipient and its causes and consequences.

It is not too much to emphasize that in the last years the advances in the technology and medicine in Ecuador have evolved so much that more and more are the organs accessible to a donation by the modern machines and medical specialists in transplants thanks to their acquired knowledge repercusses in the benefit of the Ecuadorians since nowadays a donation is conformed by very developed medical techniques so that a donation is of a successful form and without complications for the receivers.

## **Charpter I**

### **Ecuadorian law of organ donation**

#### **1.1Definition of organ donation**

Thanks to the organic law of donation and transplantation of organs, tissues and cells which is the most important part of the donation process because, since without it, surgical developments cannot take place in Ecuador , this process not only implies the legal part ,but also includes the professional and family area. It presents relevant aspects in human rights, professional and ethics ,especially in Ecuador are being implemented new services both technological, medical and legal that in the 20th century have caused great impact on the welfare of Ecuadorian citizens.

Ecuador's efficiency has envolved considerably due to the responsability of private and public health centers, the State and society have shown great interest in supporting and financing transplants and organ donations in the country. Bayón (1999) affirms: “no cabe duda, la donación es un acto de solidaridad. En una sociedad como la nuestra, salpicada de escándalos, en la que parecen haber desaparecido los nobles ideales”(p. 4).

##### **1.1.1 Types of donors.**

There are two types of donors which are the living and the deceased, according to their origin ,that fulfill the same purpose for the 21st century society to progress as a country and culture and thus give an opportunity of life to Ecuadorians and their families who need it most.

##### ***1.1.1.1 Living donor.***

The living donors should not suffer any life-threatening risk with the certainty that they will not present difficulties to the donor in the future. There is a specific type of organs that are allowed to donate in life which are the kidney , a percentage of part of the liver, pancreas and lung. When



an organ is in the process of donation , it is always a specific person who fulfills a pattern that is derived after performing some tests, usually a close relative.

In some cases it often happens that donors appear as volunteers who obviously do not suffer from any type of mental imbalance and are sure of their decision to donate organs, not for relatives or acquaintances, but for the most appropriate person depending on the urgency in many and with a greater compatibility so that the organ can be accepted in the body of the person receiving the donation, these volunteers give life expectancy to people who are on the waiting list.

In Ecuador, there are new surgical techniques for the process of stretching organs in living donors to reduce the percentage of aggression in your body and thus reduce the process of stay in the medical center and scarring so that they can continue with their lives normally. Art. 33.- Living donation requirements.- "Any person may donate in life (...).c) That the donor and the recipient have been previously informed of the possible consequences of their decision and give their written consent (...)" (National Constituent Assembly, 2011, p.7).

#### ***1.1.1.2 Deceased donor.***

People are classified as those who agree that their organs should be donated and that when they die their should be removed from their bodies, the death of donors can be caused by encephalic death produced by the cessation of cerebral activity which is irreversible or by asystole produced by asystole produced by the total absence of cardiac systole which causes the cardiac activity to disappear, in other words a cardiac arrest is generated. Agüero (2013) affirms: "El donante ideal es el cadavérico en muerte encefálica o parada cardíaca porque, exceptuando el daño cerebral, puede convertirse en el tratamiento ideal para 10 pacientes con enfermedad terminal"(p. 24).

The benefit of an encephalic donor's death is that the person does not suffer any post-surgical damage as this is the primary danger of people who are living donors and have some organ to donate to a sick person. Art. 41.-Corpse donation.-"Once the death of a person has been proven and certified, all or part of his organs, tissues and/or cells may be disposed of, in accordance with the provisions of article 29 of this Law" (National Constituent Assembly, 2011, p.7).

## **1.2 Impact**

In the 21st century organ donation has caused great controversy because of its different aspects , since in order to proceed with its development two very relevant aspects must be taken into account that are political and social , without them donations could not take place in Ecuador.

### **1.2.1 Social.**

The knowledge of the laws covering organ donations, the constitutional dogma that guarantees the access to an organ bank in the event of a need for an organ donor or organ, as well as the rights and obligations of both the donor and the recipient to be able to access this right protected by the constitution.

The Knowledge of the organic dogma that allows the correct application of the law in case of requiring any organ. It is necessary for society to be aware of these issues, to be informed about them , since we are all tacit donors by law , but if we don't want to be donors, it is necessary to inform the civil registry authority expressly that we don't want to be donors in life , so as not to form part of the list of available donors once they have died .

In Ecuador the most donated organs are the kidneys and corneas in the 2018 registry since 9 out of every 10 Ecuadorians are established in the civil registry that their organs can be donated on a stable basis if they allow it when they die if they are not from terminal illnesses and are over 18

years of age and are able to perform these procedures. For either medical or personal preparation there should be specialized equipment for transplantation by means of processes that come from education and morality, preferable with the requirement of postgraduate studies for the preparation of agreements with other countries(National Constituent Assembly, 2011).

### **1.2.2 Political.**

At the moment of a transplant the ethic of the doctors is valued to carry out their assigned functions with respect to the subject and certain phases of operation must be fulfilled , the prosecution fulfills a very important role of potential donors and thus to avoid the sale of organs illegally and illicitly and at the same time the quality of the organ that is going to be donated is guaranteed, the process of transparency is fulfilled contemplated in the constitution and other organic laws to accede to the list of recipients of organs.

Art. 15.- National Integrated Donation System and Transplants.It will include institutions, programmes, policies, resources,actions and actors related to the transplantation activity of human organs, tissues and cells.The development of the System will be based on the technical analysis of the potentialities and capacities of the institutions of the System National Public Health.(National Constituent Assembly, 2011, p.5)

## **Charpter II**

### **Problems and development of organ donations**

## **2.1 Waiting list**

In the clinical field, the waiting list serves as a method of organization through a database where the names of patients waiting for a transplant are found and thus know who is the most suitable to receive a transplant of the organ is depending on its severity of their necessity and compatibility with the donor according to the following criteria such as blood group and anthropometric aspects; in many cases, it is given more importance to people with a lower percentage of lifetime and children under 18.

### **2.1.1 Medical aspects.**

The processes of the compatibility tests can be those that take the longest in the donation process, can take up to eight hours depending on the compatibility between the donor and the potential recipients, the most important samples are the blood and lymph node and are called histocompatibility tests. Art. 25.- National Single Waiting List -"The organs, tissues and/or cells shall be distributed respecting the National Single Waiting List; and, in specific cases, based on the technical scales adopted for each particular organ and tissue"(National Constituent Assembly, 2011, p.6).

From the lymph node, samples cells are extracted and these are related to the blood samples, which are secured in a test bank or samples from patients who are on the waiting list for a donation. These processes are mandatory to know the compatibility between donor and recipient, if there is no compatibility, it is not possible to continue with the processes but if there is compatibility, studies are carried out to typify leukocyte antigens and as a result compatibility levels are obtained.

Once the donor selection process is over, a panel of reagents is made to ensure that the recipient does not have antibodies in the body that may eventually reject the donated organ. With these

tests, it is determined who is the most suitable recipient to receive the organ. These processes represent a lot of responsibility from doctors; for that reason, they must be highly qualified, in their decisions there is the opportunity of life of a person, the state grants them advanced and precise technology since this type of tests rather start from the knowledge of the pharmacobiologists than from the technological apparatus.

### **2.1.2 Social aspects.**

About a thousand patients in Ecuador are waiting for a donation, fortunately in Ecuador has managed to reach heart surgery in 2011 was the year of a positive change in the country with respect to organ donations thanks to that in March of the same year came into force the organic law of organ donation and transplantation of organs, tissues, and cells, however in other countries with better possibilities and are economic and social had come to face surgeries and reproductive devices.

With the passing of the years, one of the most awaited organs has been the kidney, for which people are waiting for their donation of 15 to 20 years enslaved to a dialysis machine 2 to 3 times a week.

Art. 25.- National Single Waiting List – according to the parameters defined following the regulations established by the competent authority for each organ and/or tissue. The National Health Authority shall administer this database and assign the anatomical components respecting universal and constitutional principles and criteria, especially the best interests of children and conditions of double vulnerability. (National Constituent Assembly, 2011, p.6)

## **2.2 Organ traffic**

It is based on the sale and marketing of organs to obtain economic benefits either from adults or children in an illegal way, which is a very serious crime in most countries because the methods of extracting organs is kidnapping and killing people, as well as cons following the organs by involvement of the private sector and the financial industry that are used as facilitators, however organ trafficking has a very important place in crime because this crime is invisible, because it is very unlikely to find the culprits because they are kept protected and hidden, while the doctors and families are the most affected.

### **2.2.1 Causes.**

Organ trafficking is a global problem, it could be thought that some years ago it was taken as a legend or a myth and as evidence are the disappearances of minors, especially in Latin America, each year thousands of children disappear for violent murders or are sold by their families in exchange for money or goods, these cases are never confirmed if in reality that was its purpose, nor with policial reports or studies that can ensure such information. All Ecuadorians residing in another country have the right to have access to an organ transplant if necessary. They will be added to the national waiting list according to the regulations and agreements with the foreign country regarding the Ecuadorian state (National Constituent Assembly, 2011).

Over the years the purpose of organ trafficking has been used as a means for foreign patients who, after years of waiting for a donor, decide to go to the black market, where they decide to travel to foreign countries, generally in countries with low resource indexes such as Ecuador, Venezuela and Panama to get the organ needed illegally, because being "poor" countries their

level of injustice is greater, and thus results in not generating maximum control in the transplantation activities of the state.

### **2.2.2 Consequences.**

This problem can present detrimental changes for the country since it produces the distrust on the part of the inhabitants in relation to the transplants and this causes indirectly the decrease of the rate of donations either corpse or voluntary and they are going to increase the patients in waiting list, prolonging their stay and with a higher percentage of risk of deaths.

In order to avoid these serious situations, it is necessary to ensure the ethical behavior of doctors and authorized personnel during the transplant process, the active participation of the state around the country in the control of transplant areas and health areas, especially in components of the state that influence communication about any breach of the law and is reported through reports or media, these aspects are essential to prevent organ trafficking and live a better coexistence between citizens and the state.

## **Chapter III**

### **Organ transplant problems**

#### **3.1 Life with transplanted organs**

From a donation the life of both donors and recipients require a lot of care and that infers that they have many limits during the rest of their lives, they can not exceed with the food they



consume, physical activity, medications, sex, can not consume any type of alcohol or drugs, especially prevention and reviews should be constant to avoid the presence of any infection to keep your body healthy and there are no dangers in the functioning of the organ donated in the case of the recipient.

If the conditions that the recipients have to take responsibility for the well-being of their lives are rigorously met, the organ can remain stable in the body for many years and thus make your donation not in vain and very profitable because donating an organ in life is based on the solidarity and dedication of the donor to the neighbor.

Art. 71.- Preventive Measures - In the event of actions or omissions that could cause harm or constitute a danger to the health of persons, as a consequence of activities related to this Law, the National Health Authority shall establish the preventive measures to be adopted, in accordance with the corresponding regulations. (National Constituent Assembly, 2011, p.9)

### **3.1.1 Infections.**

The treatment received by the recipient of a solid organ transplant hinders the defensive functions of the body against any infection, in an extreme case these infections can cause organ dysfunction or rejection, even death of the recipient if preventive measures are not anticipated. This risk must be meticulously assessed in order to optimize the state and use of the organs, without increasing the anomaly and morbidity and mortality in the recipient, however there are factors that clarify the appearance of infections such as states of neutropenia and immunosuppression generated by drugs but can not be stopped since they keep the organ donated from the first day and for the rest of their lives, for no reason can stop consuming the organ on its own or modify the prescribed dose, since in the long run can present the failure of the transplant. Vaccination measures should be taken because these drugs weaken the immune system and infections occur, not only the recipient should be vaccinated but the people around them, it is

important to recognize the pathology of the infections to solve it without the infection evolves with a respective medical treatment and thus avoid causing something much more risky that may attempt with the life of the person.

### **3.1.2 Lifestyle.**

Recipients must have a very strict way of life since in many cases the donated organs only remain approximately 5 years in the body of the recipient since the body is able to detect that this organ is not its own and rejects it, so it is vital that the recipient follows the treatments correctly with the dose proposed by the doctor specialist. "In the event of a late diagnosis of an infection, disease or malignancy in the donor, the recipient will be informed of any risks to which they may have been exposed. The individual decision to disclose take into account the particular circumstances" (Amm Statement on Organ and Tissue Donation, 2019, p.33).

### **3.2 Transplanted organ rejection reactions in the person**

The rejection of an organ is of great concern and risk because at the time of receiving a donation the body goes through a state of tests and analysis to see if the organ works and agrees with the body that for a few months must accept the organ and develops successfully. The recipient of the donation after the transplant should remain in a hospitalization area for a period of time to ensure that everything is flowing well with their transplant and the length of stay will depend on the transplant and the patient's evolution (Hepatobiopancreatic Surgery and Transplant Unit, 2019).

There are 3 types of rejection which are hyperacute rejection which is the immediate loss of the organ, but does not happen very often unless all means of a donation have not been verified with responsibility; acute rejection usually occurs in the first few months of a donation because of

immunosuppressants, however it is not usually so serious thanks to these, but the symptoms and manifestations vary depending on the type of organ although it can be reversed with medication; Chronic rejection occurs after many months or years in patients with a slower evolution and is one of the most frequent today because people have a higher deficit of obesity or problems related to food, alcohol and physical activity.

### **3.2.1 Causes and consequences.**

The body's immune system usually protects the body from substances that can be harmful, such as toxins, microorganisms, or cancer cells; These substances have proteins called antigens that the body relates as "strangers" from the moment they enter the body and the immune system attacks them, this happens at the time of receiving a donation, the body recognized that organ as foreign because the cells are different between the body and the organ and that produces that they are not compatible, the organs that do not have sufficient compatibility trigger a series of reactions in the body such as organ rejection, so that this does not develop the doctors typify the antigens tato of the donor as the recipient and so the more similar there is less chance of rejection of the organ.

The doctors by treatment and medicines manage to inhibit the immune system of the recipient to prevent the system from attacking the newly transplanted organ in the event that the compatibility is not close, if this treatment is not used properly the body will always try to launch an immune response to destroy foreign tissue, however there are exceptions such as corneal transplants that rarely presents rejection because this area lacks blood flow and identical twin transplants also lacks rejections for sharing the same genetic structure.

## **Conclusions**

At the end of the monographic work it is included that:

- To donate is required:
- Be over 18 years of age
- Decide to donate voluntarily
- Specify the organs, tissues or cells you want to donate using a form.
- Communicate the decision to family members or loved ones.
- Express when you want to be licensed to donate organs (in the event of a death the

parents have the right to decide to donate the organs).

- All the processes for a donation go in chain and has to go through legal and medical

processes that require a lot of time and precision because when making a donation puts at

risk the lives of 2 people and the integrity of professionals, in a quality is a more concrete

result towards terminal insufficiencies from the dysfunctionality of an organ but it is only

possible if you have adequate information and awareness about the importance of making organ donations, as this act begins being individual that ends in collective.

- Donations are part of a moral commitment that forces to be reciprocal, its effectiveness depends on the individual and as the first few months after receiving a donation, in other words, would be how the recipient and his family is transformed by this great pressure that is the life of a loved one, mostly influence factors of food, physical activity, etc., a recipient has to change their lifestyle to a much stricter and healthier without consuming substances harmful to the body and following a regime of medicines and conditions.
- People must be informed and conceive a transplant as an alternative to save lives or improve the quality of life of people who need it and that depends on whether or not it lives in solidarity which is more viable if it is done voluntarily with small acts not only donating organs but also blood which is one of the most viable options and considered around the world to be able to contribute collectively. The organ donations it's a huge controversial issue for society in this century for the different reasons that cause the deterioration of organs, actually In Ecuador a lot of people are on the waiting list for a donor who can give them another chance to live .
- One of the most important aspects is the law of donations that declares that all citizens are donors when they die, unless they choose to refuse you it at the moment of to renewing the identification card. Currently, the government has taken other measures to give more importance to those who need a donation, and that has caused a lot of hope for Ecuadorian families.
- Keep in mind that the communication between relatives and friends at the time of being a donor so that they already have a notion of the risks it takes to be a donor but at the same

time the value that constitutes that person to save lives because such donations bring fruit in the future, in addition, to form you as a successful person.

### **Recommendations**

After complete this monograph investigation it is recommended that:

- That people have a better lifestyle, a healthier one based on diet and physical activity to avoid situations such as insufficiencies in their vital organs, since the organs are what gives life to the body and are consulted with their trusted doctor at least once a year to see the performance of their organs as strictly avoiding alcohol and drugs and especially raise awareness about donations at the time of death and thus give life to other people.
- The information presented in this monograph provides the necessary aspects to be informed of donations in Ecuador and serves to inform others outside and inside school institutions.
- Consider that the care you give to the organs may depend on a good on the future of a close relative or another person.
- Through communication guide those who wish to donate organs in the future and express how important this act and if it requires information said by the doctors themselves are recommended to do so to obtain more concrete information with analysis and statistics.

## References

- Asamblea Nacional Constituyente .(2011).*Ley Orgánica de Donación y Transplantes de Órganos, Tejidos y Células*. No.398. Quito,Ecuador: Registro Oficial Retrieved from [http://www.donaciontrasplante.gob.ec/indot/wp-content/uploads/downloads/2013/11/ley\\_y\\_reglamento\\_a\\_la\\_ley\\_organica\\_de\\_donacion\\_y\\_trasplantes.pdf](http://www.donaciontrasplante.gob.ec/indot/wp-content/uploads/downloads/2013/11/ley_y_reglamento_a_la_ley_organica_de_donacion_y_trasplantes.pdf)
- Matesanzs,R.(2006).*El milagro de los transplantes: de la donación de órganos a las células madre*. 1a ed. Madrid: La Esfera de los libros.
- Ministerio De Salud Pública .(2019).*Ecuador cuenta con Reglamento a la Ley Orgánica de Donación y Transplantes de Órganos , Tejidos y Células* . Retrived from <https://www.salud.gob.ec/ecuador-cuenta-con-reglamento-a-la-ley-organica-de-donacion-y-trasplantes-de-organos-tejidos-y-celulas/>
- Moreno, L.(2004).*El proceso de donación y transplante de órganos*. 2a ed. Alcalá: Alcalá grupo editorial.
- Registro Civil.(2019). *Dirección General De Registro Civil Identificación y Cedulación.Ecuatorianos mantienen su condición de donantes* . Retrived from <https://www.registrocivil.gob.ec/ecuatorianos-mantienen-su-condicion-de-donantes/#>



**QR Code**