Abstract

Aim: To know the quality of life perception of those patients who have a transplanted organ. Material and methodology: Bibliographic review of international and national database articles published since 2008. Results: Their expectations and their future quality of life are conditioned by the singular situation of each patient. The most important differences are: sexual activity, social isolation and psychological alterations. Conclusions: Transplants require an adaptation period and a sort of needs that should be solved by health professionals to ensure their complete welfare status.

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1. Introduction

Since last decades, organ transplants have supposed one of the most important progresses for science, not only for health recuperation but also for the quality of life improvement of transplanted patients (Alarcón, Aguilar, Jiménez & Manrique, 2002). Nevertheless, it was in 1989 when Spanish Health Administration created the National Transplants Organization (NTO) (Organización Nacional de Trasplantes, 2005). This organization was responsible of managing and coordinating all the activities related with transplants in Spain. Since that until now,
organ transplants have been considered like a therapeutic action, whose survival rates are completely contrasted by the Spanish National Health System (Martínez-Alarcón, 2005).

According to recent researches (Almeida, 2012; Rebolledo, 2008), transplants, either organ or tissues transplants, are a medical action integrated in our hospitals and present a specific legal framework. They suppose a limited number of operations that cannot progress with an important human support apart from the required economic resources. This task needs the citizens' awareness whose donations let new transplants develop. Thus, transplants are considered beyond their medical perspective, as a task developed by a multidisciplinary team from a bio-psycho-social perspective that assumes the quality of life concept directly related to physical, mental and social welfare and not only to the lack of illnesses (Bertoni, Rosati, Zannazi, Becherelli, Gallo & Salvadori, 2004).

The transplant process refers to a wide course of events that start with the identification of the donor, the donation application to the family, the preservation and maintenance of the organs that will be transplanted, the health professional team coordination and ends with the own transplant operation. Therefore, it is indispensable that the adequate work of those persons and institutions that develop the transplant process is perfectly coordinated.

From a broader analysis, it is remarkable that solid organ transplants (kidney, liver, heart, pancreas or lungs) are more frequent each time. They have become a systematic component of health attention although they used to be characteristic only in those wealthy countries (Ocampo, Zapata, Villa and Vinaccia, 2007). The United Network for Organ Sharing (2013) affirms that among the 70,000 transplanted organs every year, approximately a 72% are used to kidney replacement and more than a third part of these operations are carried out in countries with low or medium incomes.

In Spain, donation rates have increased uninterruptedly since last 10 years and, consequently, also transplant rates. During this period, about 100,000 Spanish persons have received a transplanted solid organ or tissue (Daga-Ruiz, Fernández-Aguirre, Segura-González y Carballo-Ruiz, 2008). Thus, logistics and health professionals preparation in Spain is one of the best all over the world (Yildirim, 2006), to the extent that Spain has one of the biggest rates in Europe (27 for each million of inhabitants) so it is a model for other countries (Domínguez-Gil et al., 2011). Spanish people make up a caring and awareness citizenship so one organ transplant has become a social event; this fact suppose a paradigm that supports the social values transformation of our society.

1.1. Quality of Life in Transplanted Patients

Quality of life is a subjective concept also known as “perceived quality of life”. Quality of life is mediated by several aspects that are part of our lives, for instance, home, education, job or health (Rodríguez, Amador, Camacho & Duarte, 2003). Among these all aspects, our study focuses exclusively on Health Related Quality of Life (HRQoL).

In this sense, HRQoL refers to: “the subjective assessment of the influence of the health status, medical caring and health promotion on the skill of a person to do those activities considered as important and that affect to his welfare” (Arzúa, 2010). The dimensions that make up HRQoL are: social, physical and cognitive functioning, mobility, personal caring and personal welfare personal (Madrigal, Velandrino & Ruzafa, 2010).

Although this variable is absolutely necessary in all the patients and in transplanted patients in particular, the current situation affirms that there are not continuous measurements of it due to its lack of objectivity (Matesanz, Mahillo, Álvarez & Carmona, 2009). However, health professionals find important that a transplanted patient has a positive perception of this process because its high cost or the necessary resources to carry it out (Burgos, Amador & Ballesteros, 2007). In order to get it, they use this variable that allows the assessment of the need and quality of caring, the comparison between the affectivity and the efficacy of different types of treatments and its utility in individual monitoring of patients.

The transplant experience in last years has increased the survival index of these persons who face an unexpected future as well as a new life.
2. Aim

The aim of our research focuses on the knowledge of the scientific publications about the perceived quality of life on organ transplanted patients.

2.1. Specific aims

- To identify the differences on quality of life perception of the main solid organs transplants (kidneys, liver, heart, pancreas and lungs).
- To compare the quality of life perception of men and women who have a transplanted organ.

3. Material and Methodology

The development of this study is based on Cochrane Manual for Diagnostic Test Accuracy (Higgins & Green 2011). The systematic article review was the tool used to solve and identify the factors related to our objectives. In this sense, the bibliographic search was let determine if there are differences in quality of life perception among the main solid organs transplants. In the same way, it eased an answer for the question about gender and quality of life perception in transplanted patients.

3.1. Study design

The systematic review is based on Higgins and Green (2011) recommendations. In this way, the research focused on two types of scientific documents; on one side, those documents that develop the quality of life perception in transplanted patients through diagnosis validation (DV), on the other side, and those documents that verify gender differences.

3.2. Types of study

Through the bibliographic search, this research has focused on DV studies, observational studies that compare the differences depending on gender and the transplanted organ and experimental studies, including comparison, sensibility and specificity data as well as predictor values and probability reasons with respect to other tools. The systematic reviews that fitted with these criteria have been considered in this research; therefore, they have been also analyzed.

3.3. Search strategies

The reviewed databases were national and international as: ISI Web of Knowledge, Medline or Pubmed, Scopus, Cochrane, Cuiden, Enfispo, Dialnet and Scielo. Furthermore, the analysis has also searched in: NTO, Health, Social and Equality Ministry, Transplant National Center and Google Scholar. The information has been searched in English and Spanish in the period of last 5 years (from 2008 to 2013).

This search has used specific methodological filters that have been developed by the Health Information Research Unit from the University of McMaster to study diagnosis tools and clinical prediction rules (Kastner et al., 2009). The term used were: quality of life, health related quality of life, nursing, organ transplants, kidney transplant, liver transplant, heart transplant, pancreas transplant, lung transplant, gender, men, women and systematic review. All of them have been mixed together in order to obtain the best information. Moreover, the necessary terms to adapt the exclusion criteria to this revision were applied with NOT operator.

3.4. Revision method

The first stage of this revision included a detailed assessment of every titles and abstracts to determine if each
article meet the criteria and, therefore, to be considered in this research. In case of doubt, the whole article was read. In order to improve the quality of this process, two researchers were responsible of the search and subsequent reading of articles (blind process). After this initial procedure, all the selected articles were assessed again to check if they meet the criteria by two different researchers.

3.5. Data extraction

Rev-Man 5.0.24 method was used to extract the useful data from the assessed and included studies. This method analyzes the following information: patients’ clinical features, study context, participants, gender, illnesses, type of transplant and monitoring.

3.6. Ethical aspects

This research has used secondary information from other original studies, therefore, it is not subject to the same ethical rules that the original studies. Despite of it, all the participants signed an inform to ensure the lack of conflict of interest. Thus, the Meta-analysis of the results has been done depending on the heterogeneity and comparability of the found studies.

4. Results

The reviewed databases were effective to reach the aim of this research. In this way, Table 1 shows the amount of articles that have been found during the first “screening” and also how many meet the inclusion criteria. Firstly, only the main features of each article were considered: their results and abstracts. Nonetheless, the wide range of found articles invited to consider their sensibility, specificity, positive and negative predictor values, Youden and right classification index. However, due to the excessive heterogeneity, the Meta-analysis did not develop as it was expected but it based exclusively on a narrative revision of the different studies.

<table>
<thead>
<tr>
<th>Databases</th>
<th>Found Articles</th>
<th>Articles that meet the criteria</th>
<th>Used Articles</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Medline/Pubmed</td>
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<td>Dialnet</td>
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<tr>
<td>Cochrane</td>
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The analysis of the quality of life perception obtained from the found bibliography is presented according to the organ that has been transplanted or the gender of the transplanted patient.

4.1. Quality of life after kidney transplant

The analyzed data affirm that kidney transplant is the usual treatment for patients with terminal renal insufficiency. Normally, this disease is developed after having suffered diabetes, glomerulonephritis or cyst disease. As mentioned before, the quality of life is closely linked to the survival of transplanted patients. In this case, a 90% of transplanted patients get over the first year after the operation (Canché-Arenas, Reza-Orozco &
Rodríguez-Weber, 2011); the mean of life after a kidney transplant is about 10 ten years (Chien & Wang, 2010). According to Ortuño’s (2004) research, the patient survival increases exponentially when the donor is alive due to the better conditions of immunological and biological factors as well as cold ischemia intervals.

The kidney transplant supposes an improvement in the patient quality of life because it entails the liberation of dialysis and diet restrictions as well as a complete renal function recovering. It produces an improvement in patient health perception because they do not consider dialysis as a method to recover their health but a temporal process. All the analyzed studies about quality of life perception in this type of transplanted patients affirm that the main improvements are: physical activity and mental aspects in 80% of cases and social aspects in 60% of cases, and lastly and broadly, an important improvement in quality of life (Manu et al., 2009; Nielens et al., 2012).

4.2. Quality of life after liver transplant

The liver transplant is reserved for those patients with serious liver diseases like cirrhosis or tumor complications (Ortega & Rebollo, 2006). The survival of these patients after a year is estimated in a 70 – 85 % of cases and a 60 – 65 % after 5 years. These survival rates are directly related with the general patient status. The results are worse in transplants caused by serious hepatic insufficiency; a 5 % suffers rejection.

The positive effects that increase the quality of life are found in about a 80 % of cases who are able to develop their usual life. Lundgren et al. (2008) affirm that the possibility of becoming parents increase the quality of life of hepatic transplanted patients despite their immunosuppressive treatment for life.

4.3. Quality of life after heart transplant

The studies analysis shows two obstacles the heart transplanted patient must face meanwhile he waits for a donor. On one side, finding a donor is not easy because this type of transplant is reserved only for terminal heart insufficiency. On the other side, the survival after the operation. Although the survival rates has been improved during last years (De Montero & Rosado, 2006), the first three months are still crucial. According to the last study developed by National Register (Registro Nacional, 2011), the early death affects a 15 % of patients. Moreover, the transplant rejection is common in this type of transplants.

Considering these factors, the bibliography shows that quality of life depends on the quality of the transplant, the immunosuppressive treatment and personal factors of each patient as well. The whole recuperation usually lasts between 3 to 9 months; after this period, the quality of life in patients increases, they recover their family life, their job, their physical activity and also the possibility of travelling without many limitations (Taylor et al., 2007).

4.4. Quality of life after pancreas transplant

Diabetes insulin-dependent is the cause of most of diseases derivated from this pathology. Due to that, a chronic patient shows a serious deterioration of quality and expectatives in life. Pancreas transplant supposes a liberation of insulin as well as physical and diet restrictions. For this reason, their quality of life increase considerably. Despite it, researches consider more problematic this evolution due to the secondary complications (NTO, 2013).

The several studies of this research assess the quality of life through programs like SF-36. They have something in common: the evident improvement after the operation. According to the conclusions reached by studies developed by International Register (Registro Internacional, 2012), patients feel the next improvements:

- Rehabilitation towards a normal life, with physical, psychologic and social welfare.
- Improvement of their health perception and their quality of life.
- Scant restrictions in their daily life, what increases their welfare sensation and independence.
- Scan restrictions of physical activity.
4.5. Quality of life after lung transplant

The lung transplant has evolved considerably during the last years. It is the most frequently used therapy in those patients who suffer an advanced lung disease and do not have any contraindication for transplants (American Thoracic Society, 2008). The analyzed studies affirm that emphysema is the most frequent cause of these types of transplants, especially unilateral ones. Smoker emphysema is the next cause. The main causes of two-sided transplants are cystic fibrosis and emphysema.

These patients have high survival rates; a 70% survive after the first year. The survivor patients feel a progressive improvement and recover a functionality and vital capacity very similar to non-transplanted persons’. Different studies about quality of life have demonstrated that receptors feel an improvement and it maintain for life (Limbos, Joyce, Chan & Kesten, 2007).

4.6. Differences between men and women in quality of life

The amount of analyzed studies reveals the lack of differences between men and women quality of life perception. Nevertheless, it is important to remark that the little differences are always related to recovery period. For instance, the kidney transplanted men recuperation is faster than women’s (Heredia, Montero, Varas, Salvatierra & Martínez, 2010).

5. Discussion

As it is observed, the attached results let the valuation of a wide range of scientific material from databases as well as the documentation of the analyses institutions. Nevertheless, once the documents have been studied, we can appreciate a deficiency w.r.t. the bibliographic reviews that support our research. There is an important amount of studies about the perceived quality of life on organ transplanted patients although most of them focus on only type of organ transplanted patient (kidney, liver, lung, etc.). Therefore, the bibliographic reviews towards transplanted patients in general and towards quality of life on patients are not united at all. This is even more evident should we add gender considerations. The scarce research works at this respect (Burgos, Amador and Ballesteros, 2007; Ferreira de Aguilar, Rios, Leite, Soares, Tavares, De Almeida, 2011) show the differences on gender considerations w.r.t. as the health status before the transplant as during the sickness. This fact reflects the importance of increasing the researching fields towards related areas.

The studies that have been the base of this research have also provided relevant findings. In relation to the recovery period, Parrilla, Ramírez and Ríos (2008) refer that patients notice an improvement in their quality of life perception after six months and their best perception after one year. Nonetheless, Gómez-Marinero, De Santiago-Guervós and Fuentes-Pérez ratify that personal factors condition the transplant expectatives and future life perspective as well. The main differences that transplanted patients find are sexual activity, social isolation and psychological alterations (Servicio de Donación y Trasplantes, 2012). Analogously, Daga-Ruiz, Fernández-Aguirre, Segura-González and Carballo-Ruiz (2008) include the job return, the possibility of creating a family and the loss of diet and treatment restrictions. Transplants suppose an improvement in the quality of life of patients although they require an adaptation period and a sort of needs that should be solved by health professionals in order to ensure a complete welfare status.

6. Conclusions

Transplanted patients present significant changes in their quality of life once the transplant operation has been carried out. The improvement of their lifestyle is an aspect widely confirmed by many researches despite they do not delve equally in all the areas of transplant, patients and family. The perceptions of patients and their families allow the progress of the investigation towards the whole certainty of being developing the correct skills. Most of the researches focus on quality of life attention after the transplant operation. Thus, new investigations about this matter are required in order to assess the short term quality of life without forgetting the long term quality of life.
The increasing number of transplanted patients and the volume of the analysed bibliography point the rising engagement of health professionals and researchers with transplanted patients and their quality of life.

References