

ANNOTATION

**for the dissertation work of DOSKHANOV MAXAT ONALBAYEVICH
on the topic «Improving the organization of care for patients before and after
transplantation in the Republic of Kazakhstan» for the degree of Doctor of
Philosophy PhD in the specialty 6D110200 – Public Health**

Relevance of the research topic

End stage liver disease is a common cause of morbidity and mortality worldwide [1-7]. The global mortality estimation in 2010 revealed that 2% of all deaths (about 1 million patient deaths) are associated with end stage liver disease [8,9].

In the European region, the mortality related to liver disease ranks seventh, in the UK it is fifth among people under 65 years of age, in the United States of America it is fourth among the age groups of 45-54 years, where more than half of all cases are caused by viral hepatitis (C), alcoholic and non-alcoholic steatohepatitis, as well as a component of metabolic syndrome [10-16].

As the liver disease progresses, the patient's condition may turn into decompensated liver cirrhosis, that is, into end stage liver disease. Liver cirrhosis is a priority issue of public health, ranking the 13th most common cause of mortality in the world, and global mortality increased from 1.54% to 1.95% in 2010 compared with 1980 [17-23]. It is worth noting that the second most common solid organ is liver transplantation. In the world practice, only 10% of the global needs for transplantation are provided [13]. Liver transplantation has proven to be an effective method of treating patients with end stage liver disease, with an annual survival rate of 91% and a three-year survival rate of about 80%.

Liver transplantation in the European region is associated with cirrhosis in 50% of cases, mainly associated with viral infection (22% hepatitis C (VHC) and 5% hepatitis B) or with alcohol abuse (19 %) [24].

After liver transplantation, patients are at a higher risk of malignant neoplasms, kidney failure and metabolic complications. Despite the benefits of liver transplantation, there are additional concerns about the impact on quality of life.

In a systematic review, Jen-Kuei Peng et al. analyzed 45 studies of the quality of life of patients with end stage liver disease, which revealed that the prevalence of symptoms in patients with end stage liver disease is associated with advanced comorbidities. Given the variety of symptoms and significant deterioration in health-related quality of life, an interdisciplinary approach and timely intervention are crucial [25].

In Kazakhstan, liver transplantation was performed for the first time in 2011. A.N. Syzganova National Scientific Center of Surgery for the first time began to perform liver transplantation from a living donor. Living donor liver transplantation allows for scheduling of transplantation compared to a deceased liver donor. The results show that liver transplantation technologies have improved, with 1- and 3-year survival rates were 90.5% and 79.6%, respectively. As of December 2018, a total of 283 liver transplantation procedures were performed at 5 transplantation centers in Kazakhstan [26].

Thus, the relevance of this study lies in a comprehensive assessment of the liver transplantation program in the Republic of Kazakhstan, including the issues of

continuity of care between the hospital and primary care, and the study of the quality of life of patients after liver transplantation.

Purpose of the research

Improving integrated care for patients before and after liver transplantation by evaluating the effectiveness of medical and organizational care.

Research objectives

1. Study domestic and world experience in liver transplantation and problems of its organization;
2. Identify the main problems of patients requiring liver transplantation;
3. Analysis of the results of the work of medical institutions performing liver transplantation in the Republic of Kazakhstan;
4. Assess the quality of life of patients before and after liver transplantation;
5. Develop recommendations for improving the organization of integrated care for patients before and after liver transplantation.

Subject of research

Methodology for evaluating the effectiveness of medical and organizational care for patients after liver transplantation.

Research methods

- Bibliographic search;
- Information and analytical;
- Historical;
- Sociological (survey);
- Expert review;
- International scale for assessing physical activity.

Scientific novelty

Scientific novelty and theoretical significance of the research lies in the fact that:

- for the first time, the prevalence of liver disease and results of liver transplantation in the Republic of Kazakhstan were analyzed on the basis of official statistics, which make it possible to determine the degree of incidence by structure, region and type of population, the level of dispensary observation, and also to determine the effectiveness of liver transplantation from a living and deceased donor.

For the first time, the opinions of the population on deceased donation in the Republic of Kazakhstan were studied, the main topical and organizational issues of liver transplantation were identified:

- based on our own outcome analysis of liver transplantation, clinical and organizational recommendations for the prevention and correction of post-surgery complications have been developed;

- quality of life was assessed using SF 36 and IPAQ before and after liver transplantation, justifying the effectiveness of this technology by determining the physical activity of patients after liver transplantation and components of SF 36 of physical and mental measurements;

- for the first time, the evaluation findings of care delivery to patients after liver transplantation are proposed.

Practical significance

Research results are intended for use at various levels by health authorities, heads of medical organizations for organizing and monitoring the effectiveness of liver

transplantation programs, as well as aimed at improving intersectoral cooperation. The results are also important for the educational sphere in order to organize professional development for primary care employees (nurses, physicians, and multidisciplinary team).

The main provisions for the defense

1. According to statistics from the roadmap of Hepatological centers of the Republic of Kazakhstan, the number of patients in need of liver transplantation in the end stage of liver developed as a result of viral hepatitis B and C is quite high. In this regard, these patients have the main urgent problems: lack of statistics of liver diseases developed from non-viral hepatitis in hepatological centers, the complexity of inpatient treatment, the shortage of donors (deceased and related). This requires improving and developing the quality of medical care by solving the main urgent problems of patients before liver transplantation and increasing the number of deceased donors.

2. It is necessary to review the requirements (standard) for domestic liver transplantation centers and make the following changes providing for compliance with international rules: the availability of specialists and equipment for liver transplantation, the presence of multidisciplinary group, the number of liver transplantations should be at least 10 per year, and the results after liver transplantation should correspond to world indicators.

3. The quality of life of patients after liver transplantation is much better than in the period before liver transplantation. The development of patient pathway (algorithm and recommendations) at various stages (outpatient, transplant center and post-surgery period) will improve the organization of medical care for patients of this contingent.

Volume and structure of the dissertation work

The dissertation work consists of an introduction, 8 chapters, findings, conclusions, practical recommendations, a list of references, including 191 literary sources.

The dissertation is presented on 168 pages of typewritten text, illustrated with 32 tables, 59 figures.