

DEVELOPMENT OF THE NATIONAL TRANSPLANTATION SYSTEM IN THE REPUBLIC OF MOLDOVA

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Summary - Due to the support of the Council of Europe and the European Commission experts within the Joint Programme, the law on transplantation of organs, tissues and cells of human origin was adopted by the Parliament of the Republic of Moldova in March 2008. To ensure safety and quality in the field of transplantation, the Republic of Moldova aims to adopt and implement the law in compliance with the principles of the European Union health acquis.

According to the new legislation the Transplant Agency was created as a public body in May 2010. In the context of setting up the transplantation system a number of legislative acts were adopted, including the Regulation on organization of the Independent Commission for approval of organ/tissues/cells procurement from live donors, the clinical protocols "Brain Death" and "Maintenance of the potential brain death donor". The implementation of the integrated computer system for transplant management and organ allocation was started.

Ten hospitals were authorized for the procurement and transplantation of human organs, tissues and cells. The transplant coordinators – 8 doctors, personnel responsible for organ and tissue transplantation – 13 doctors were appointed and initially trained. Technical devices for the HLA Laboratory were purchased for subsequent installation and validation. Equipment for brain death detection and management of potential organ donors was installed. In December 2011 renal transplant activity was initiated with an intervention from a living donor. The first multi-tissue bank was established in October 2011.

There is an ongoing development in law enforcement. The next step forward is implementation of the "Brain Death" protocol and initiation of organ and tissue procurement from deceased donors.

Introduction

Over the last 50 years, organ transplantation has become a widely accepted and successful treatment method that has provided the best therapeutic benefit for more than one million people worldwide. Nevertheless, patients with established end-stage organ failure living in developing countries face many barriers including the lack of suitable legislation and transplantation infrastructure

(competent authority, hospital transplant coordinators, skilled procurement and transplantation teams), quality and safety issues, and susceptibility to transplant tourism. The development of an appropriate transplant service in the Republic of Moldova represents a priority for the Government and specifically for the Ministry of Health to ensure high standards of quality and safety with respect to the procurement, testing, processing, preservation, storage and distribution of human organs, tissues and cells.

This paper illustrates actions taken to develop the transplantation system in the Republic of Moldova in compliance with the principles of the European Union (EU) health acquis.

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History of the transplantation system development in the Republic of Moldova

Transplantation activities began in the Republic of Moldova with tissue transplants in 1960, most frequently bone and cornea transplants.

Organ transplantation in the Republic of Moldova started with the entry into force of the order of the USSR Ministry of Health no.153 from 22 February 1982 on "The right of kidney procurement and preservation for transplant". The first cadaveric kidney transplant from non-heart beating donors (NHBD) occurred in June 1982. Kidney transplantation activity in the period 1982-1999 was as follows:

- Kidney retrieval from NHBD – 196 cases;
- Kidney transplantation – 242 cases.

Improved medical techniques in the field of organ and tissue transplantation heralded the need for a law in this area, based on internationally recognized criteria. Law No. 473-XIV on human organs and tissues transplantation was adopted on June 25, 1999. Dialysis and Kidney Transplantation Department activity in the period 2000-2008 was as follows:

- Kidney retrievals from living related donors – 15 cases;
- Kidney transplantation with kidneys from heart beating donors (HBD) – 6 cases;
- Total number of transplants – 21 cases.

Low activity problems of the transplant service in the Republic of Moldova during this period were numerous and serious:

- Insufficient knowledge of transplant legislation by the majority of state institutions, medical opinion, citizens, church, etc.;
- Absence of an organ transplantation programme approved by the Government;
- Negative mass-media image of transplant services in post-soviet countries (Russia, Ukraine and Moldova);
- Influence of international trafficking in illegal organs (kidney) from living donors on the development of transplantation in the Republic of Moldova.

Within the Joint Programme of the European Commission and the Council of Europe to support democratic reforms in Moldova for 2004-2006, Council of Europe experts organized several seminars and workshops making several suggestions, including changing the law on transplantation of organs, tissues and cells of human origin and setting up the Transplant Agency. As a result of these efforts Law No. 42 "On transplantation of organs, tissues and cells of human origin" was drafted and adopted by the Parliament of the Republic of Moldova on March 6, 2008. According to the new legislation the Transplant Agency was created as a public body by Government Decision no. 386 on May 14, 2010. The implementation of the transplant policy is entrusted to

the Transplant Agency, which has the following declared aims and objectives:

- Drafting of the consecutive legal framework derived from Law No. 42-XVI / 06/03.2008 on the transplantation of organs, tissues and cells of human origin;
- Drafting of the consecutive legal framework derived from Law No. 185-XV / 24/05.2001 on medical fertilization and family planning;
- To evaluate and propose for authorization medical units for transplant activities – i.e.: a) organ / tissue / cells procurement, b) organ / tissue / cells transplantation, c) banking tissues / cells;
- To organize and supervise the entire transplantation activity in the Republic of Moldova;
- To evaluate the current situation / activities in the field of transplantation in the Republic of Moldova;
- To correctly inform the public opinion and to promote organ donation;
- To organize international cooperation with transplant agencies from neighbouring and EU countries.

Actions taken to develop the transplantation system between 2010 to 2012

The Republic of Moldova is committed to implementing the activities in the field of transplantation of organs, tissues and cells in compliance with EU Directives (Directive 2004/23/EC; Commission Directive 2006/17/EC; Commission Directive 2006/86/EC; Commission Directive 2010/45/EC).

The series of legislative actions have been undertaken while determining the legal framework adjusted to international legal norms and EU requirements:

- Government Decision no. 1207 on approval of the Regulation on organization and operation of the independent Approval Commission under the Ministry of Health and authorization criteria for the activities of procurement and transplantation from 27.12.2010;
- Ministry of Health (MH) Order no. 725 on approval of the Advisory Council Regulation under the Transplant Agency from 01.11.2010;
- MH Order no. 234 on the organization and performance of procurement and transplantation of organs, tissues and cells of human origin from 24.03.2011;
- MH Order no. 493 on drawing up of the waiting list for renal, liver and heart transplantation from 16.06.2011;
- MH Order no. 698 on the intensification of activities for the initiation of renal transplantation from 12.09.2011;
- MH Order no. 885 on the approval of documents for the independent approval commission for acceptance or refusal of the procurement of organs, tissues or cells from living donors from 18.11.2011.

According to MH Order no. 527 from 27.06.2011 and no.156 from 24.02.2012 on the authorization of medical-health institutions, ten institutions were authorized for the performance of procurement and transplantation of organs, tissues and cells of human origin.

The transplant coordinators – 8 doctors and 4 nurses, personnel responsible for organ and tissue transplantation – 13 doctors have been appointed and initially trained to perform the assigned tasks. Standard operating procedures for the activities of the transplant coordinators were clearly defined and documented.

In the context of setting up an efficient transplant system, the Ministry of Health adopted two therapeutic protocols: clinical protocol “Brain Death” from 05.04.2011 and clinical protocol “Maintenance of the potential brain death donor” from 30.03.2012. The equipment for brain death detection and management of potential organ donors was subsequently purchased and installed.

Taking into account that “the tests required for organ and donor characterization shall be carried out by laboratories with suitably qualified or trained and competent personnel and adequate facilities and equipment” (Directive 2010/53/EU, Article 7 (4)), the following steps were taken: HLA serological specification nomenclature adopted by Ministry of Health Order no. 234 on the organization and performance of procurement and transplantation of organs, tissues and cells of human origin from 24.03.2011; HLA laboratory location identified as the Clinical Diagnostic Laboratory, Republican Clinical Hospital; equipment and technical devices purchased for subsequent installation and validation.

The implementation of the integrated computer system for transplant management and organ allocation – SIA “TRANSPLANT” as well as formation of the waiting lists have started this year. The first training for Transplant Agency staff on SIA “TRANSPLANT” was held on April 26, 2012, the next one – for the transplant coordinators – on May 14-18, 2012.

According to the new legislation the procurement of organs, tissues and cells from live donors is allowed only after the Independent Commission authorization. Six pairs of live donors – recipients were approved. In December 2011 the renal transplant activity was initiated with an intervention from a living donor.

The first national multi-tissue bank in the Republic of Moldova was established in October 2011. The tissue banking activities in the full volume will be available by the end of 2012.

The National Program for Transplant activities describing the directions of the functioning and development of the transplantation system in the Republic of Moldova and covering the period 2012-2016 is in the process of being approved by the Government. The Ministry of Health

and the National Health Insurance Company approved its content and budget in May 2012.

To raise public and medical awareness of organ, tissue and cell donation the promotion campaign on donation and transplantation of organs, tissues and cells in Moldova started in October 2011. The European Day for Organ Donation & Transplantation was celebrated in Moldova for the first time on October 22, 2011.

International cooperation

International cooperation is recommended by the European Commission as being desirable for increasing the donor rate and harmonising the level of transplant availability among countries (European Commission June 27, 2006). The Partnership and Cooperation Agreement (1998) and the EU-Moldova European Neighbourhood Policy Action Plan (2005) currently govern relations between the European Union and the Republic of Moldova. The Eastern Partnership, launched by the European Commission in May 2009, builds upon these Agreements and is designed to deepen bilateral relations with partner countries through enhanced political association and closer economic integration. The European Neighborhood Policy opens new partnership perspectives, among which “Support including technical assistance and twinning to meet EU norms and standards, and targeted advice and support for legislative approximation through a mechanism such as TAIEX”.

Once appropriate staff had been identified and hired, the European Union started supporting the Transplant Agency in the Republic of Moldova through the TAIEX instrument. Since 2010 we have benefited from the TAIEX Workshop (INT MARKT 42651) on “Legislative, organizational and economical aspects of donation and transplantation”, TAIEX Study Visit (INT MARKT 43847) on the provisions of the Directive 2010/45/EU on standards of quality and safety of human organs intended for transplantation, TAIEX Expert Mission (INT MARKT 44930) on setting up the first national multi-tissue bank in the Republic of Moldova, TAIEX Expert Mission (INT MARKT 47370) on training of transplant coordinators’ trainers, TAIEX Expert Mission (INT MARKT 49147) on setting up the Human Leukocyte Antigen (HLA) Laboratory and training personnel involved in HLA testing for transplantation. The next step forward is strengthening the Transplant Agency of the Republic of Moldova and support in legal approximation in the area of quality and safety of substances of human origin through the Twinning project activities.

The Transplant Agency of the Republic of Moldova cooperates closely with the French Agency of Biomedicine and the Romanian National Transplant Agency in the

field of transplant activities. In April 2011, the Moldovan Transplant Agency and the French Agency of Biomedicine signed a three-year cooperation agreement to support transplantation development in the Republic of Moldova. In December 2011, the same cooperation agreement was signed between the Moldovan and Romanian Transplant Agencies. Practical stages are organised in French and Romanian hospitals for doctors from Moldova. Site visits by French and Romanian experts have been organised as well as training sessions with transplant coordinators. Within the framework of the Black Sea Area Project, where the Moldovan Transplant Agency is the project coordinator, regional training sessions, workshops and site visits have been organised in the Republic of Moldova and in the other partner countries. On the grounds of the South-eastern European Health Network the regional seminars on linked topics such as brain death, transplant coordination in hospital, ethics are organised on a regular basis.

Conclusions

There are examples of successful transplant programs in many developing countries: the development of national transplant programs and proper organisational infrastructure, the growing availability of less expensive generic immunosuppressive agents, improved clinical training opportunities are only a few of the factors that contributed to the development of transplant services. For many developing countries kidney transplantation is an essential, viable, cost-effective, and life-saving therapy which could be provided as an alternative to dialysis. The practical steps each country should implement include the following: legislation, organisational infrastructure, a living related kidney transplant programme and consequent development of DCD transplantation.

In the Republic of Moldova there is an ongoing development in law enforcement and implementation of quality

assurance standards. The next step forward is implementation of the "Brain Death" protocol and initiation of organ and tissue procurement from deceased donors.⁰

The authors declare that they have no conflict of interest.

References

- ¹ COUNCIL OF EUROPE: Consensus document; Organ Shortage: Current Status and Strategies for Improvement of Organ Donation - A European Consensus, Meeting The Organ Shortage, Editorial. *Nefrologia*, Supl. 4; **1999**:XIX.
- ² EUROPEAN PARLIAMENT, COUNCIL: Directive 2004/23/EC of the European Parliament and of the Council of 31 March 2004 on setting standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells. *O.J. L* 102, 2004; **47**:48-58.
- ³ EUROPEAN PARLIAMENT, COUNCIL: Commission Directive 2006/17/EC of 8 February 2006 implementing Directive 2004/23/EC of the European Parliament and of the Council as regards certain technical requirements for the donation, procurement and testing of human tissues and cells. *O.J. L* 38, 2006; **49**:40-52.
- ⁴ EUROPEAN PARLIAMENT, COUNCIL: Commission Directive 2006/86/EC of 24 October 2006 implementing Directive 2004/23/EC of the European Parliament and of the Council as regards traceability requirements, notification of serious adverse reactions and events and certain technical requirements for the coding, processing, preservation, storage and distribution of human tissues and cells. *O.J. L* 294, 2008; **49**:32-50.
- ⁵ EUROPEAN PARLIAMENT, COUNCIL: Directive 2010/53/EU of the European Parliament and of the Council of 7 July 2010 on standards of quality and safety of human organs intended for transplantation. *O.J. L* 207, 2008; **53**:14-29.
- ⁶ EUROPEAN DIRECTORATE FOR THE QUALITY OF MEDICINE & HEALTHCARE. COUNCIL: Guide to safety and quality assurance for the transplantation of organs, tissues and cells, 4th edition, Directorate for the Quality of Medicine & HealthCare of the Council of Europe publishing, 3-313, 2010.